

**KV-13VM40/41**

*Operating Instructions* ■

**KV-20VM40**

*Mode d'emploi* ■

**KV-20VS40**

*Manuel de instrucciones* ■

# ***Trinitron® Color Video/TV***

**VHS Video**

**combo**

**VCR<sup>Plus+</sup>**

**VHS**

**Hi-Fi**

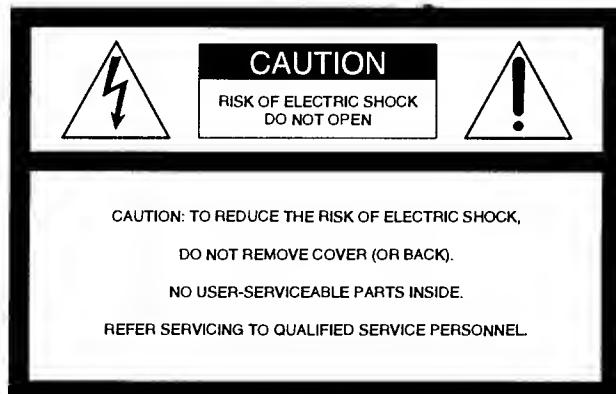
## **Owner's Record**

The model and serial numbers are located at the rear of the video TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

# WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

When using TV games, computers, and similar products with your Video/TV, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty because they are the result of misuse.

## Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

## Note on condensation

If the Video/TV is brought directly from a cold to a warm location, moisture may condense inside the VCR and cause damage to the video head and tape. When you first install the Video/TV, or when you move it from a cold to a warm location, wait for about one hour before operating the Video/TV.

# Precautions

## Safety

- Operate the Video/TV only on 120 V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the Video/TV and have it checked by qualified personnel before operating it any further.
- Unplug the Video/TV from the wall outlet if you are not to going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

## Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the Video/TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

## Cleaning

Clean the Video/TV with a soft dry cloth. Never use strong solvents such as thinner or benzene, which might damage the finish of the cabinet.

## Transport

Keep the original carton and packing materials to use for safety transport of your Video/TV in the future.

## Information

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

If you have any questions or problems concerning your Video/TV, please contact your nearest Sony dealer.

This Video/TV receiver displays closed captioning in accordance with 15.119 of the FCC rules.

## Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this Video/TV receiver for other private viewing of programs broadcast on VHF or UHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

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\* VCR Plus+ and PlusCode are Trademarks of Gemstar Development Corp.  
VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

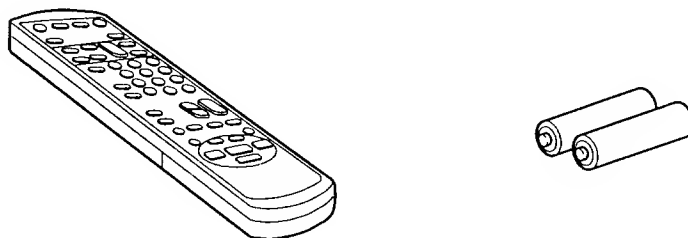
The instructions in this manual are for models KV-13VM40, KV-13VM41, KV-20VM40, and KV-20VS40. Before you begin to read this manual, refer to the model number located on the rear of your Video/TV. Model KV-20VS40 is used for illustration purposes throughout this manual. Any differences in operation are indicated in the text, for example, "KV-20VS40 only."

# Step 1 — Preparation

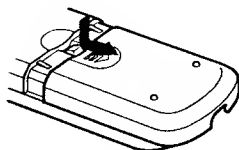
## Checking the supplied accessories

\*When you have taken everything out of the carton, check that you have these items:

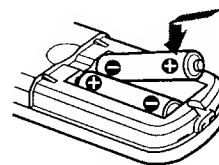
- Remote control
- Two R6 (size AA) batteries



## Inserting batteries into the remote control



Turn the remote control over, and remove the cover.



Check the polarities and insert the two R6 batteries correctly.

### Notes:

- With normal use, the batteries should last for approximately six months.
- If you do not use the remote control for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

# Step 2 — Connecting the Antenna

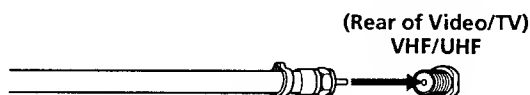
Although you can use either an indoor or outdoor antenna with your Video/TV, we recommend connecting an outdoor antenna or a cable TV system for better picture quality.

## Connecting an antenna

Connect your antenna cable to the VHF/UHF antenna terminal. If you cannot connect your antenna cable directly to the terminal, follow the instructions that match your cable type.

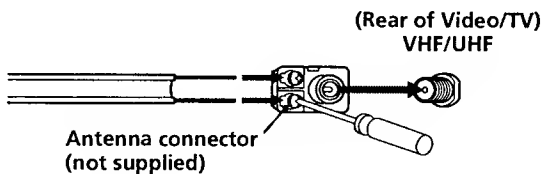
**A**

75-ohm coaxial cable



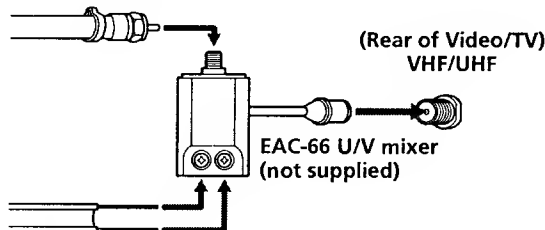
**B**

300-ohm twin lead cable



**C**

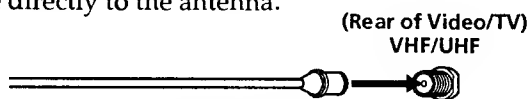
Coaxial cable and twin lead cable



## Connecting an antenna/cable TV system

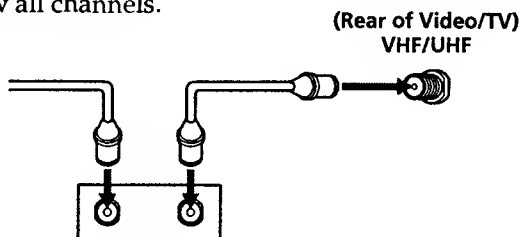
### Connecting a single cable to the antenna

Connect the cable directly to the antenna.



### Connecting to a cable box

Some pay cable TV systems use scrambled or encoded signals that require a cable box to view all channels.

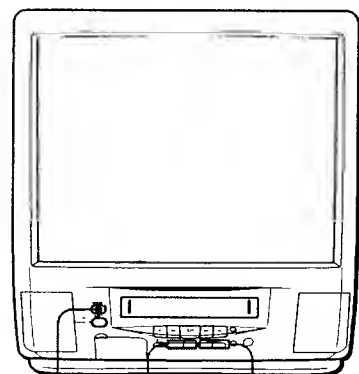


#### Notes

- Most VHF/UHF combination antennas have a signal splitter. Remove the splitter before attaching the appropriate connector.
- If you use the U/V mixer, snow and noise may appear in the picture when viewing cable TV channels over 37 (W+1).
- The cable box is supplied by the cable company.

If you control all channel selection through your cable box, you should consider using the CHANNEL FIX feature (see "Selecting the Video/TV's Cable Box Input Channel – CHANNEL FIX" on page 38.)

# Step 3 — Setting Up the Video/TV Automatically – AUTO SET UP



POWER VOL +/- CHANNEL +/-

You can set up your Video/TV easily by using the AUTO SET UP feature. To set up each item individually, see “Changing the menu language” (page 11), “Setting cable TV on or off” (page 9), and “Presetting channels — AUTO PROGRAM” (page 10).

## Before you begin

- Connect the antenna or cable to the Video/TV.

### 1 Press POWER to turn the Video/TV on.

ENGLISH : [CH+]  
ESPAÑOL : [CH-]  
FRANÇAIS : [VOL+]  
AUTO SET UP : [VOL-]

First please connect  
the antenna  
Press [INPUT SELECT]  
to exit

### 2 Select the on-screen menu language.

If you prefer Spanish or French to English, you can change the on-screen menu language by pressing CHANNEL – for Spanish or VOL + for French.

ENGLISH : [CH+]  
ESPAÑOL : [CH-]  
FRANÇAIS : [VOL+]  
AUTO SET UP : [VOL-]

Primero conecta la  
antenna  
Oprime [INPUT SELECT]  
para salir

All of the on-screen menus are set to the factory preset condition in the selected language.

### 3 Press VOL – to start AUTO SET UP.

AUTO PROGRAM

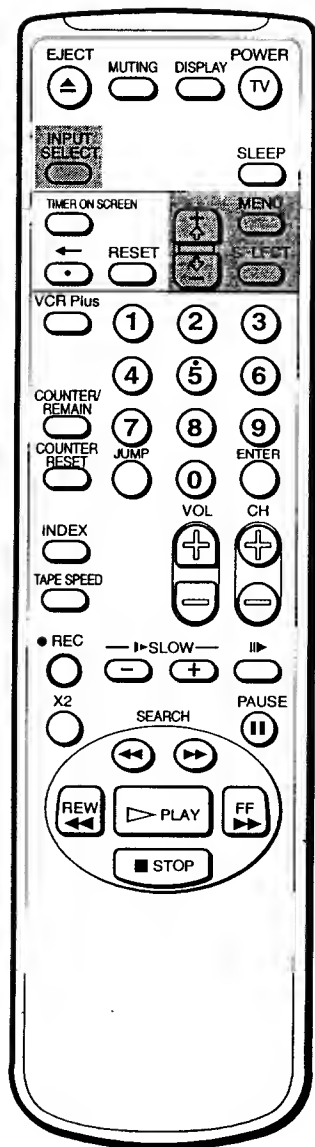
#### To reset the factory settings

Press POWER on the Video/TV while pressing RESET on the remote control.

“AUTO PROGRAM” appears on the screen and the Video/TV starts scanning and presetting channels automatically. When all receivable channels are stored, “AUTO PROGRAM” disappears and the lowest numbered channel is displayed.

## To exit AUTO SET UP

Press INPUT SELECT.



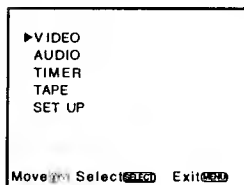
### Note

If CHANNEL SKIP/ADD appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select CHANNEL SKIP/ADD. Press INPUT SELECT so that a channel number appears on the screen.

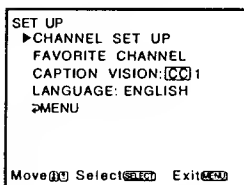
## Erasing and adding channels

After AUTO SET UP, you can erase unnecessary channels or add more channels.

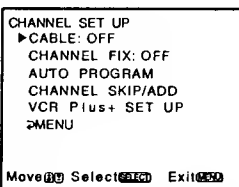
- 1 Press MENU to display the main menu.  
The main menu appears.



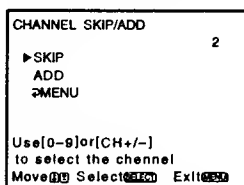
- 2 Move the cursor (▶) to "SET UP" with + ◀ or – ▶ and press SELECT.  
The SET UP menu appears.

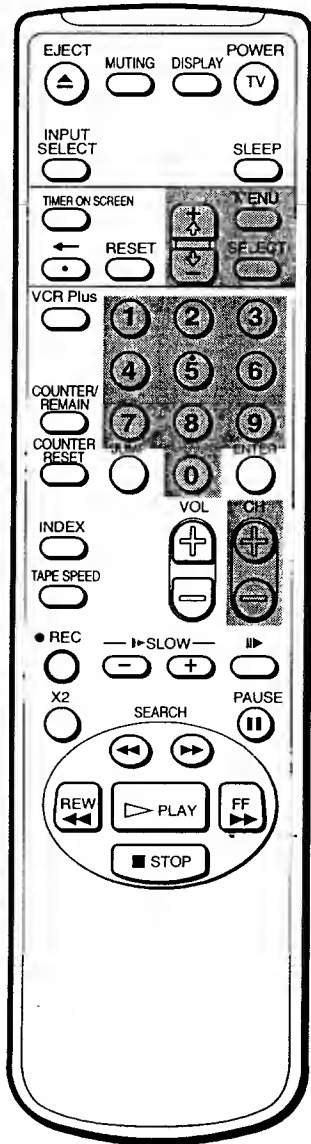


- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or – ▶ and press SELECT.  
The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to "CHANNEL SKIP/ADD" with + ◀ or – ▶ and press SELECT.  
The CHANNEL SKIP/ADD menu appears.





## 5 Erase and/or add channels:

### To erase an unwanted channel

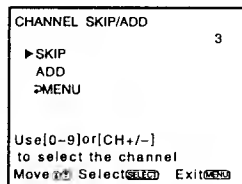
- (1) Make sure the cursor (►) is beside SKIP.
- (2) Press CH +/– or the 0 - 9 buttons to select the channel you want to erase and press SELECT.



The message "Channel will be skipped" appears for several seconds and the cursor (►) moves to ADD.

### To add a channel

- (1) Make sure the cursor (►) is beside ADD.
- (2) Press CH +/– or the 0 - 9 buttons to select the channel you want to add and press SELECT.

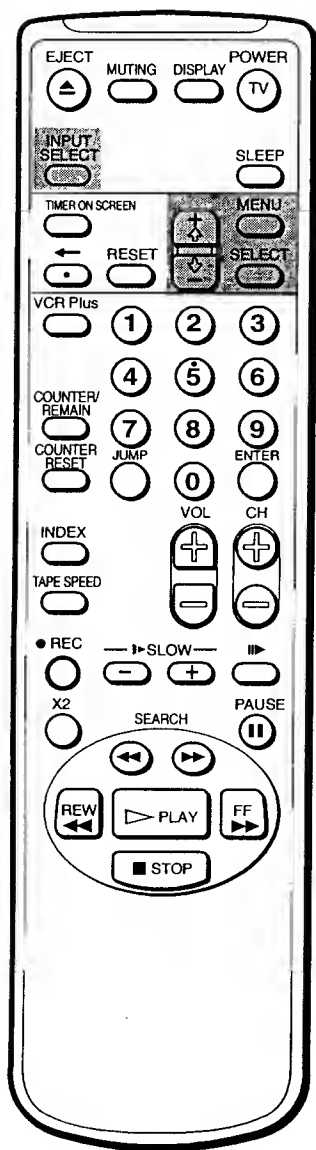


The message "Channel will be added" appears and the cursor (►) moves to SKIP.

## 6 To erase and/or add other channels, repeat step 5.

## 7 Press MENU to return to the original screen.

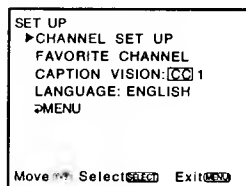




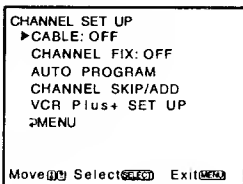
## Setting cable TV on or off

If you have connected the Video/TV to a cable TV system, set CABLE to ON (the Settingfactory setting). If not, set CABLE to OFF to watch VHF or UHF channels.

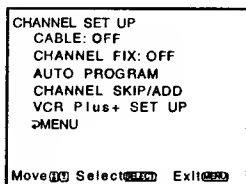
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ⬆ or - ⬇ and press SELECT. The SET UP menu appears.



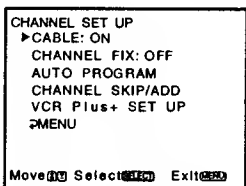
- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ⬆ or - ⬇ and press SELECT. The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to "CABLE" with + ⬆ or - ⬇ and press SELECT. The selected position turns red.



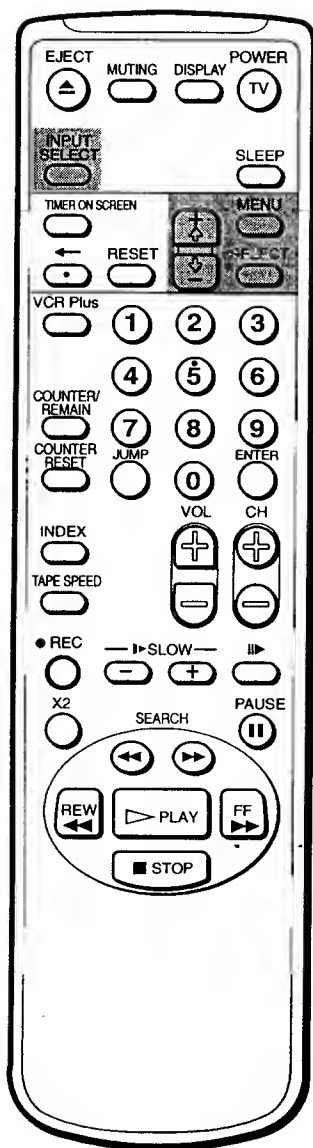
- 5 Using + ⬆ or - ⬇, select "ON" or "OFF" and press SELECT.



- 6 Press MENU to return to the original screen.

### Note

If CABLE appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select CABLE. Press INPUT SELECT so that a channel number appears on the screen.



#### Receivable channels for this Video/TV

VHF: 2 – 13  
UHF: 14 – 69  
Cable: 1 – 125

#### Note

If AUTO PROGRAM appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select AUTO PROGRAM. Press INPUT SELECT so that a channel number appears on the screen.

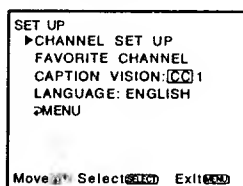
#### To erase unnecessary channels, or to add channels

See "Erasing and adding channels" (page 7).

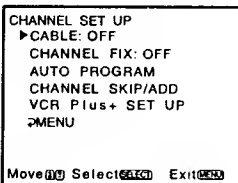
## Presetting channels – AUTO PROGRAM

You can preset TV channels easily by using the AUTO PROGRAM feature. Preset channels during the day rather than late at night, when some channels may not be broadcasting.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or – ▶ and press SELECT. The SET UP menu appears.



- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or – ▶ and press SELECT. The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to "AUTO PROGRAM" with + ◀ or – ▶ and press SELECT.

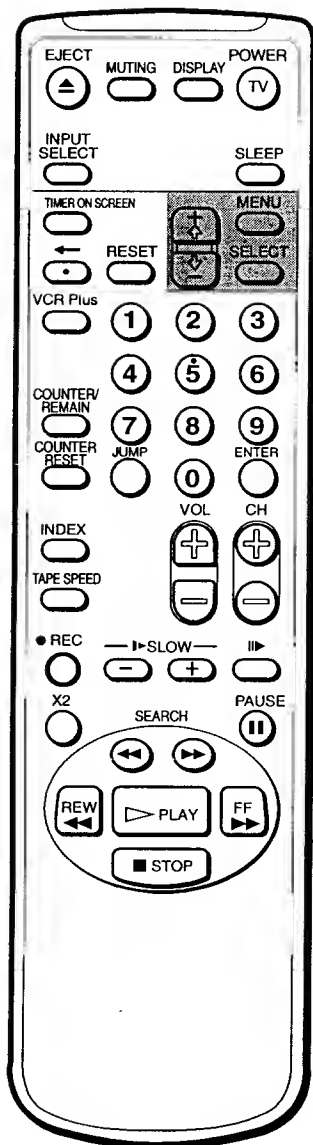


"AUTO PROGRAM" appears on the screen and the Video/TV starts scanning and presetting channels automatically. When all receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

- 5 Press MENU to return to the original screen.

## To exit AUTO PROGRAM

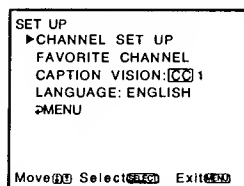
Press any button.



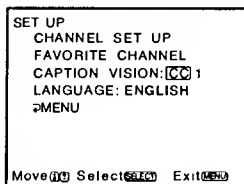
## Changing the menu language

If you prefer Spanish or French to English, change the menu language with the following steps.

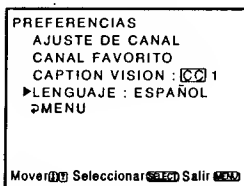
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or - ▶ and press SELECT. The SET UP menu appears.



- 3 Move the cursor (▶) to "LANGUAGE" with + ◀ or - ▶ and press SELECT. The language position turns red.

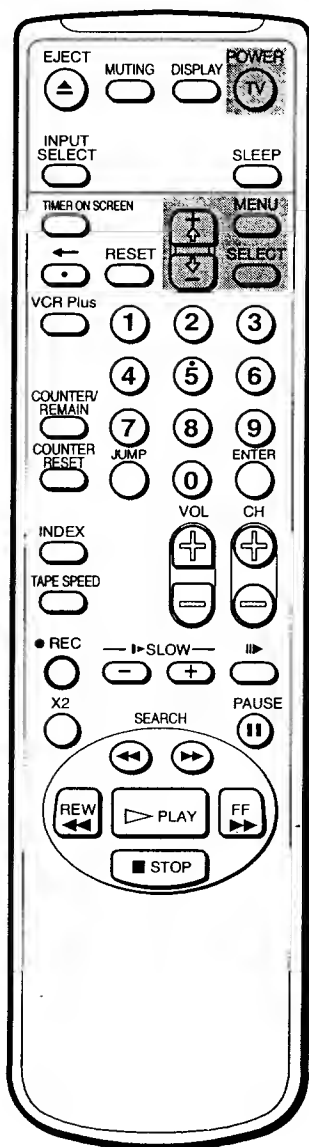


- 4 Using + ◀ or - ▶, select the language you want and press SELECT. The entire menu appears in the selected language.



- 5 Press MENU to return to the original screen.

# Step 4 — Setting the Clock



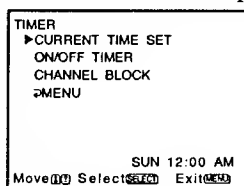
## Note

If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 45 minutes. If nothing happens even after you wait for about 45 minutes, set the clock manually.

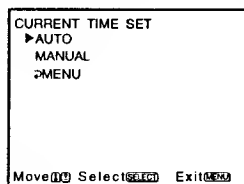
## Setting the clock automatically

Some TV and cable channels transmit time signals with their broadcasts. Your Video/TV can pick up these time signals to automatically set the clock (AUTO CLOCK). The AUTO CLOCK feature works only if a channel in your area is broadcasting a time signal. If your Video/TV cannot pick up the signals, set the clock manually (page 15).

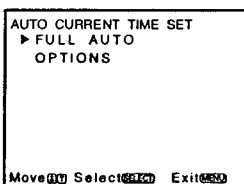
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TIMER" with + ◀ or - ▶ and press SELECT. The TIMER menu appears.



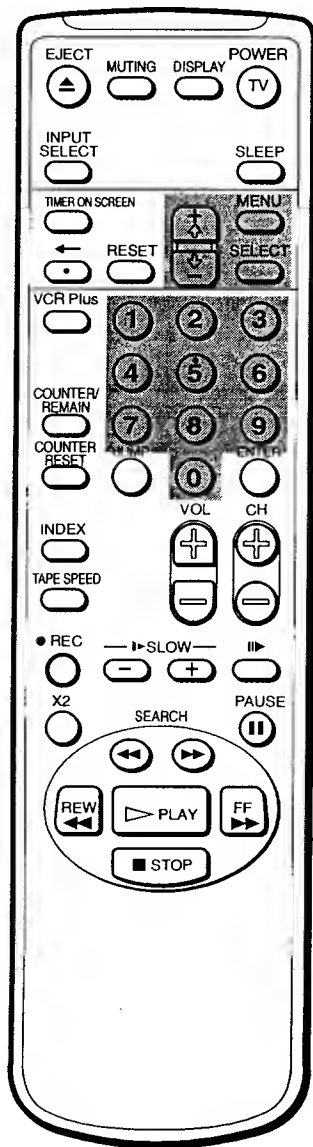
- 3 Move the cursor (▶) to "CURRENT TIME SET" with + ◀ or - ▶ and press SELECT. The CURRENT TIME SET menu appears.



- 4 Move the cursor (▶) to "AUTO" with + ◀ or - ▶ and press SELECT. The AUTO CURRENT TIME SET menu appears.



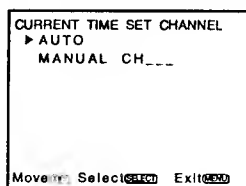
- 5 Move the cursor (▶) to "FULL AUTO" with + ◀ or - ▶ and press SELECT. The message "Please turn TV off to receive clock data" appears for 5 seconds.
- 6 To activate the Auto Clock setting, press POWER to turn the Video/TV off. The time signals automatically set the time for your time zone and adjust for daylight saving time.



## If the clock does not activate

If the clock is set, but your time zone or daylight saving time is not set correctly, you can adjust these settings manually. If you live close to a time zone border, the Video/TV's clock may not match the actual broadcast times of the programs. To confirm the time zone of the broadcast service, contact your cable company and set the clock accordingly.

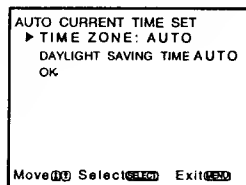
- Follow steps 1-5 in "Setting the clock automatically" and select "OPTIONS" in step 5.  
The CURRENT TIME SET CHANNEL menu appears.



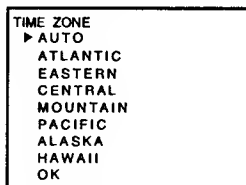
### If you know a channel number that carries a time signal

- Move the cursor (▶) to "MANUAL" with + ⬆ or - ⬇ and press SELECT.  
The CH position turns red.
- Using the 0-9 buttons, enter the channel number and press SELECT.  
Then skip steps 2-5.

- Move the cursor (▶) to "AUTO" with + ⬆ or - ⬇ and press SELECT.  
The AUTO CURRENT TIME SET menu appears.



- Move the cursor (▶) to "TIME ZONE" with + ⬆ or - ⬇ and press SELECT.  
The TIME ZONE menu appears.



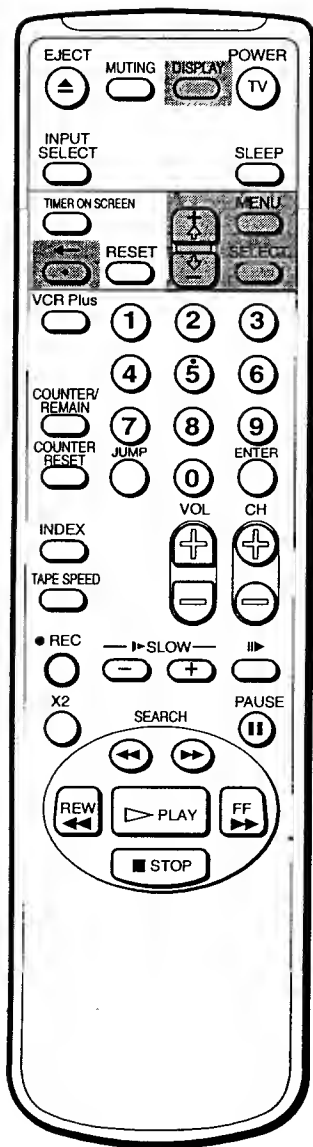
- Using + ⬆ or - ⬇, select "AUTO". Then move the cursor (▶) to "OK," and press SELECT.  
The DAYLIGHT SAVING TIME menu appears.



- 5** Using + ↕ or – ⇩, select “AUTO,” “STANDARD TIME,” or “DAYLIGHT SAVING TIME.” (See the table below). Then move the cursor (▶) to “OK,” and press SELECT.

Choose	To
AUTO	Select to set the daylight saving time automatically.
STANDARD TIME	Select if your area does not use daylight saving time.
DAYLIGHT SAVING TIME	Select if your area uses daylight saving time.

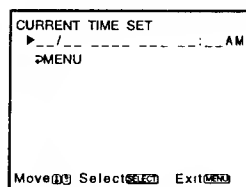
- 6** To activate the Auto Clock setting, press POWER to turn the Video/TV off.



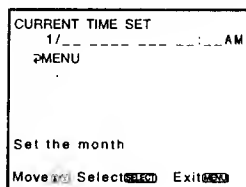
## Setting the date and clock manually

Setting the date and clock enables you to use the timer feature for recording or automatically tuning the Video/TV on or off.

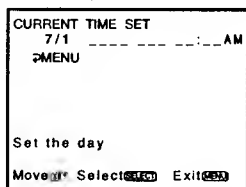
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TIMER" with + ◀ or ▶ ▹ and press SELECT. The TIMER menu appears.
- 3 Move the cursor (▶) to "CURRENT TIME SET" with + ◀ or ▶ ▹ and press SELECT. The CURRENT TIME SET menu appears.
- 4 Move the cursor (▶) to "MANUAL" with + ◀ or ▶ ▹ and press SELECT. The CURRENT TIME SET menu appears.



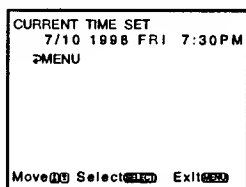
- 5 Press SELECT to start setting the clock. The month section turns red.



- 6 Using + ◀ or ▶ ▹, set the month and press SELECT. The day section turns red.



- 7 Using + ◀ or ▶ ▹ and SELECT, set the day, year, hour and minute in the same way as in step 6.



- 8 After setting the minutes, press SELECT. The clock starts working.

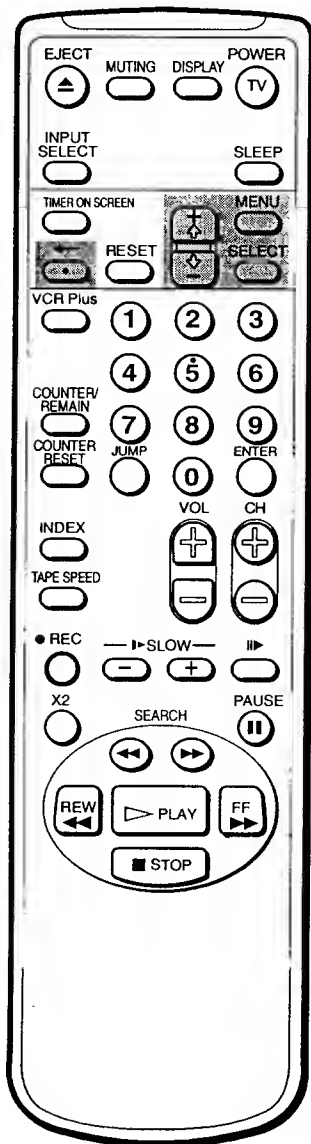
- 9 Press MENU to return to the original screen.

**To display the time**  
Press DISPLAY.

**If you have made a mistake**  
Press ◀ to return to the previous position.

**If the clock has stopped and "--/--" is displayed**  
You have to re-set the clock.

# Step 5 — Setting Up VCR Plus+



## Note

If VCR Plus+ SET UP appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select VCR Plus+ SET UP. Press INPUT SELECT so that a channel number appears on the screen.

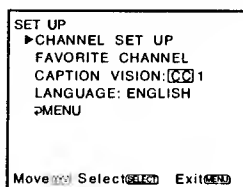
## If you have made a mistake

Press **←** to return to the previous position.

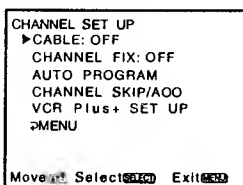
The VCR Plus+ feature allows you to simplify the task of programming your Video/TV to make recordings with the timer. Setting up your Video/TV involves coordinating the TV channel number (the number you turn to on your Video/TV or VCR to watch a program) with the guide channel (the number that's assigned to that channel in your program guide). To find the guide channel numbers, look in the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example on the next page.

## Setting the guide channel

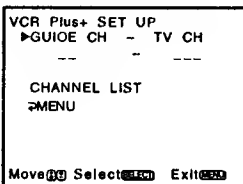
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or – ▶ and press SELECT. The SET UP menu appears.



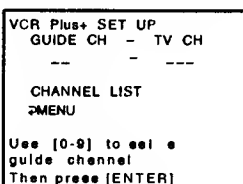
- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or – ▶ and press SELECT. The CHANNEL SET UP menu appears.



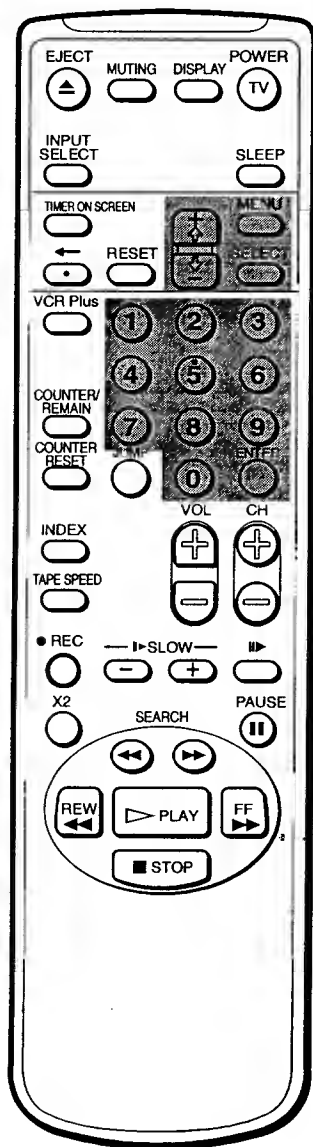
- 4 Move the cursor (▶) to "VCR Plus+ SET UP" with + ◀ or – ▶ and press SELECT. The VCR Plus+ SET UP menu appears.



- 5 Press SELECT to enter the guide channel number. The GUIDE CH position turns red.







#### Notes

- If you enter more than eight channels, the additional channels are stored on separate "pages." Move the cursor (▶) to "PAGE" and use + ⬆ or - ⬇ buttons to view the entire list.
- The maximum number of guide channels is 99.

- Press the 0-9 buttons to enter the channel number assigned in the guide channel and press ENTER.

The TV CH position turns red.

```
VCR Plus+ SET UP
GUIDE CH - TV CH
16 - ---

CHANNEL LIST
▶MENU

Use [0-9] to set a
TV channel
Then press [ENTER]
```

- Press the 0-9 buttons to enter the actual channel number on your Video/TV and press ENTER.

```
VCR Plus+ SET UP
▶GUIDE CH - TV CH
16 - 125

CHANNEL LIST
▶MENU

Move ⬅ Select ⬅ Exit ➡
```

- Repeat steps 6 and 7 for each guide channel number you want to enter.

- Move the cursor (▶) to "CHANNEL LIST" with + ⬆ or - ⬇ and press SELECT to confirm your channel settings.

```
CHANNEL LIST
GUIDE- TV GUIDE- TV
16 - 125 33 - 49
17 - 22 59 - 3
20 - 42 61 - 47
21 - 28 99 - 102

▶PAGE 1
▶MENU

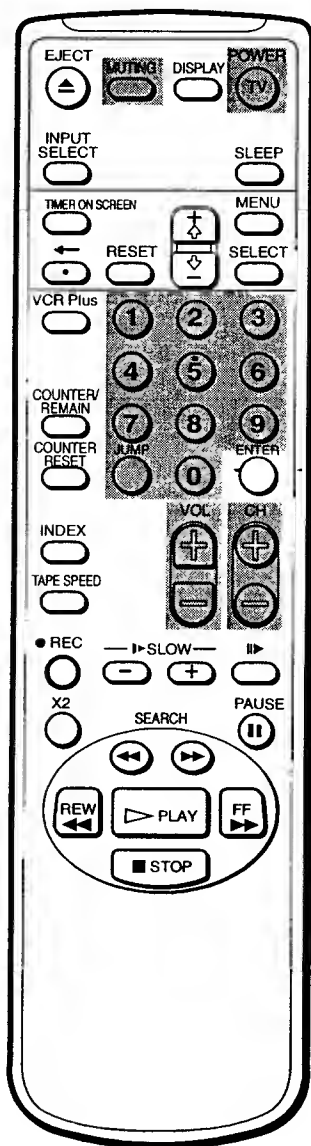
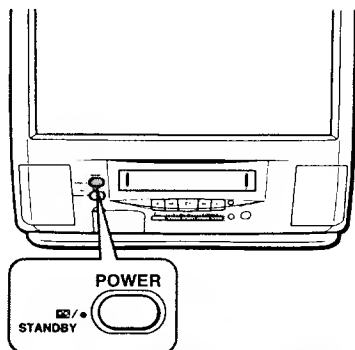
Move ⬅ Select ⬅ Exit ➡
```

- After you finish presetting, press MENU to return to the original screen.

#### Example of a "Channel Line-up Chart"

CABLE CH		VCR Plus+ GUIDE CH
16	American Movie Classics	35
17	Bravo(program gnd only)	54
20	Cable News Network	42
21	C-SPAN	28
22	The Disney Channel	53
25	The Discovery Channel	37
34	ESPN	34
35	The Family Channel	47
5	Home Box Office	33
27	Lifetime	46
29	Chromax	45
30	Muscle Television	48
31	Nickelodeon	38
38	Sports Channel	59
39	Sports Channel America	70
45	Showtime	41
17	TBS SuperStation	43
44	The Movie Channel	58
49	The Nashville Network	49
50	Turner Network Television	52
51	USA Network	44

# Watching the TV



## Note

You can not jump to channels you scanned through using the CH +/- buttons.

This section explains the basic functions to use while watching the TV. Most of the operations can be done using the remote control.

## Switching the Video/TV on and off

### Switching on

Press POWER.

The STANDBY lamp flashes until the picture appears.

### Switching off

Press POWER.

The Video/TV enters standby mode and the STANDBY lamp on the front of the Video/TV lights up in red if a tape is inserted in the Video/TV.

If a tape is not inserted in the Video/TV, the STANDBY lamp disappears.

## Selecting TV programs

Turn the cable mode ON or OFF to select the type of channel you want to watch. For more information on setting the cable mode, see "Setting cable TV on or off" on page 9.

Press CH +/- or the 0-9 buttons on the remote control, or CHANNEL +/- on the Video/TV.

### To select a double-digit numbers using the 0-9 buttons

For example, if you want to select 21, first press 2, then press 1.

## Adjusting the volume

Press VOL +/-.

## Muting the sound

Press MUTE.

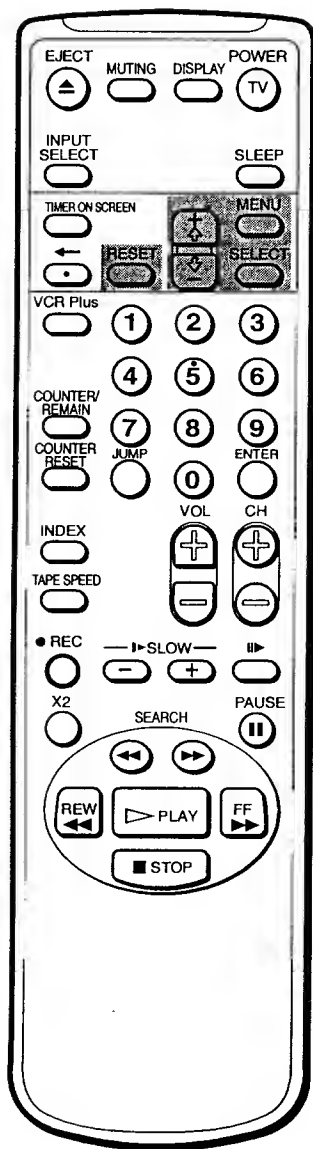
"MUTING" appears on the screen.

To resume normal sound, press MUTE again, or press VOL +.

## Switching quickly between two channels

Press JUMP. The channel switches to the previously selected channel.

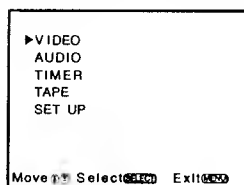
Pressing JUMP again switches the channel back to the originally selected channel.



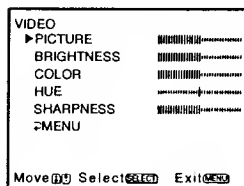
## Adjusting the picture

When watching TV programs, you can adjust the picture to suit your taste. You can adjust the picture received through the input jacks as well. These adjustments are retained in memory even when you turn off the TV.

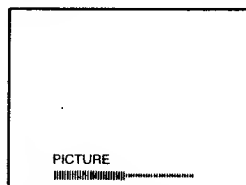
- 1 Press MENU to display the main menu.  
The main menu appears.



- 2 Move the cursor (▶) to "VIDEO" with + ⬆ or - ⬇ and press SELECT.  
The VIDEO menu appears.



- 3 Using + ⬆ or - ⬇, select the item you want to adjust and press SELECT.



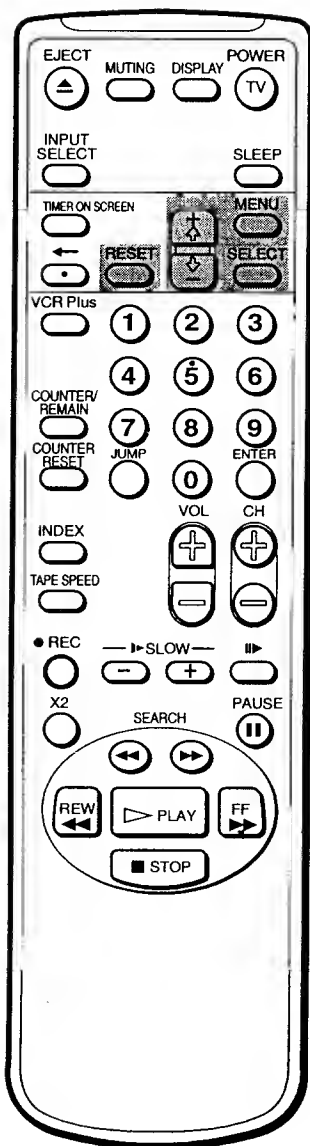
- 4 Adjust the picture with + ⬆ or - ⬇ and press SELECT.  
With each press, the vertical bars increase or decrease and the figure at the right margin changes to show the control level. (See the table below.)
- 5 To adjust other items, repeat steps 3 and 4 above.
- 6 Press MENU to return to the original screen.  
The adjusted control levels are stored.

### Description of adjustable items

Item	Press + ⬆ to	Press - ⬇ to
PICTURE	Increase picture contrast.	Decrease picture contrast.
BRIGHTNESS	Brighten the picture.	Darken the picture.
COLOR	Increase color intensity.	Decrease color intensity.
HUE	Make picture tones greenish.	Make picture tones purplish.
SHARPNESS	Sharpen the picture.	Soften the picture.

### To restore the factory settings

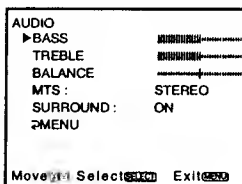
Press RESET after selecting and displaying the VIDEO menu.  
All of the settings are restored to the factory settings.



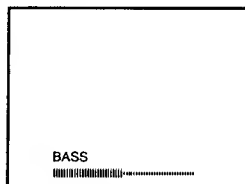
## Adjusting the sound (KV-20VS40 only)

You can adjust the bass, treble, and balance to suit your taste. You can adjust the sound of the signal received through the input jacks as well.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (►) to "AUDIO" with + ◀ or – ▶ and press SELECT. The AUDIO menu appears.



- 3 Select the item you want to adjust.  
For example:  
To adjust bass, move the cursor (►) with + ◀ or – ▶ to "BASS" and press SELECT.



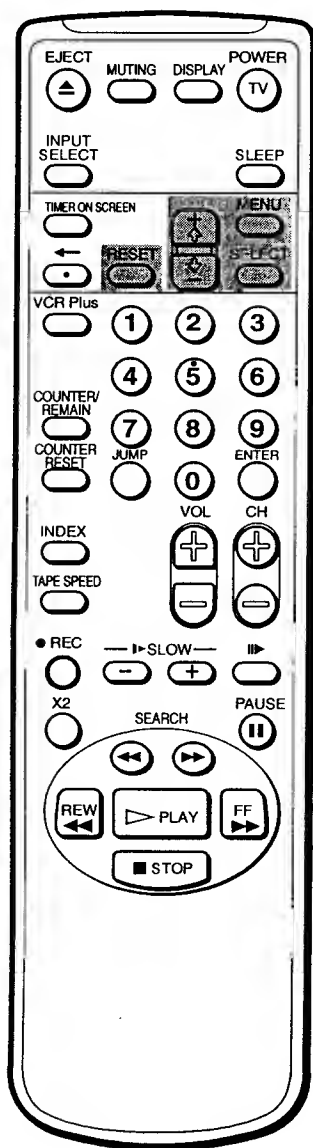
- 4 Adjust the selected item:  
Press + ◀ or – ▶ to adjust the item and press SELECT.
- 5 To adjust other items, repeat steps 3 and 4 above.
- 6 Press MENU to return to the original screen.

### Description of adjustable items

Item	Press + ◀ to	Press – ▶ to
BASS	Increase the low pitched sounds.	Decrease the low pitched sounds.
TREBLE	Increase the high pitched sounds.	Decrease the high pitched sounds.
BALANCE	Emphasize the right speaker's volume.	Emphasize the left speaker's volume.

### To restore the factory settings

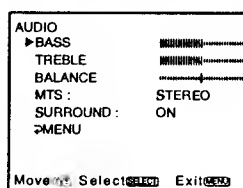
Press RESET after selecting and displaying the AUDIO menu.  
All of the settings are restored to the factory settings.



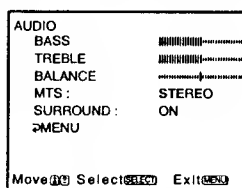
## Selecting stereo or bilingual programs (KV-20VS40 only)

The Multichannel TV Sound (MTS) feature allows you to switch between stereo, mono, and Second Audio Program (SAP).

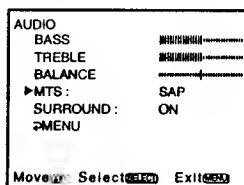
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "AUDIO" with + ◀ or ▶ and press SELECT. The AUDIO menu appears.



- 3 Move the cursor (▶) to "MTS" with + ◀ or ▶ and press SELECT. The selected position turns red.



- 4 Using + ◀ or ▶, select "STEREO," "SAP," or "MONO" and press SELECT.



### Note

If you set MTS to "SAP" and a SAP signal is not being broadcast, no sound will come from the speakers. (However, the program's primary audio channel will be recorded.) See page 22 for a table describing the relation between the speakers and the source signal.

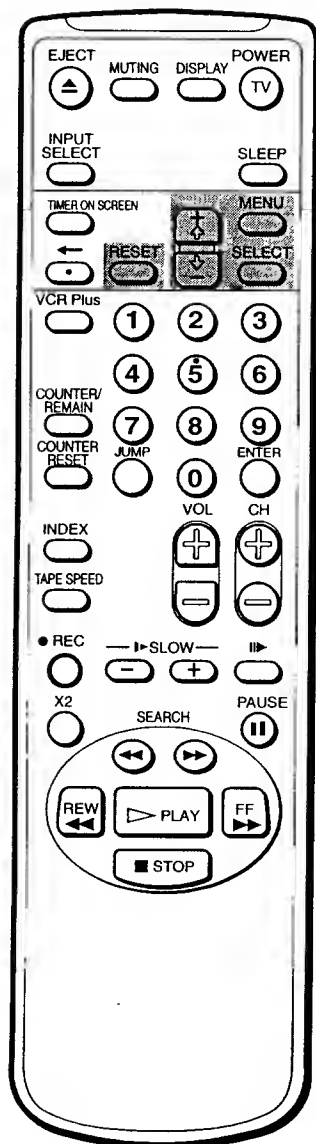
Choose	To
STEREO	Select for stereo reception when viewing a program broadcast in stereo.
SAP	Select to listen to a bilingual broadcast.
MONO	Select for mono reception (use to reduce noise during stereo broadcasts).

### To restore the factory settings

Press RESET after selecting and displaying the AUDIO menu. All of the settings are restored to the factory settings.

This table describes the relation between the sound output from the speaker, the recorded sound, and the MTS mode. For instance, if you set MTS to "SAP" and a SAP signal is not being broadcast, the sound from the speakers is muted. However, if you record the same program, the sound will be recorded in the program's primary audio channel (stereo or mono).

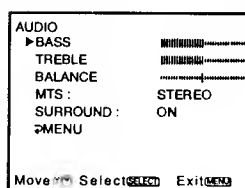
Source Signal	MTS Mode	Speaker Output		Recorded Sound			On-screen Display
		L	R	Hi-Fi "L" Track	Hi-Fi "R" Track	Normal Track	
Mono	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	None
	SAP	Mute	Mute	L + R	L + R	L + R	SAP
Stereo	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L	R	L	R	L + R	STEREO
	SAP	Mute	Mute	L	R	L + R	SAP
Mono + SAP	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	None
	SAP	SAP	SAP	SAP	SAP	SAP	SAP
Stereo + SAP	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L	R	L	R	L + R	STEREO
	SAP	SAP	SAP	SAP	SAP	SAP	SAP



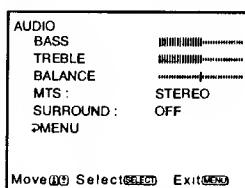
## Listening to surround sound effects (KV-20VS40 only)

The surround feature simulates the sound reproduction of a movie theater or a concert hall. Surround is only effective for stereo programs.

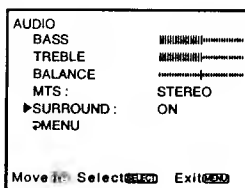
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "AUDIO" with + ◀ or ▶ and press SELECT. The AUDIO menu appears.



- 3 Move the cursor (▶) to "SURROUND" with + ◀ or ▶ and press SELECT. The selected position turns red.

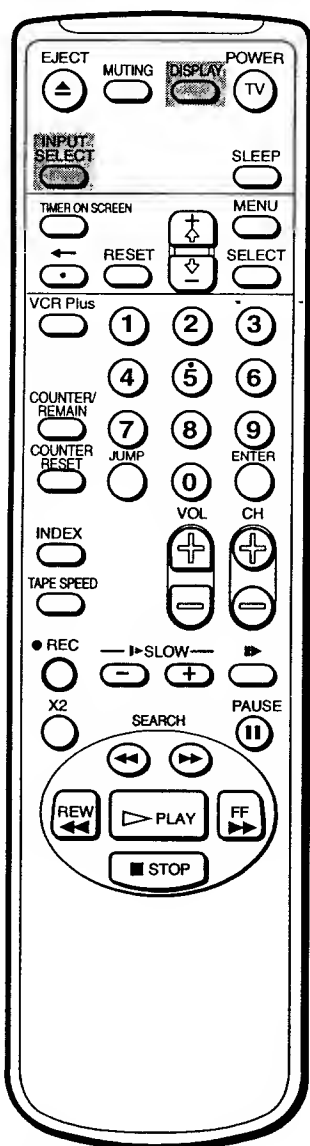
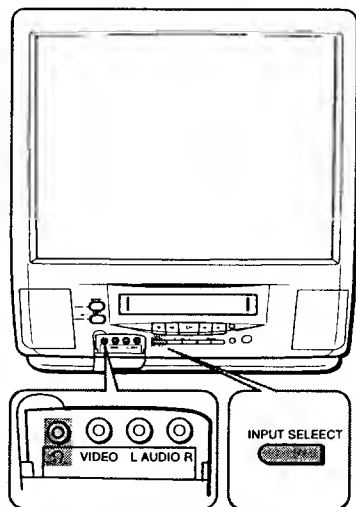


- 4 Using + ◀ or ▶, select "ON" or "OFF" and press SELECT.



### To restore the factory settings

Press RESET after selecting and displaying the AUDIO menu. All of the settings are restored to the factory settings.

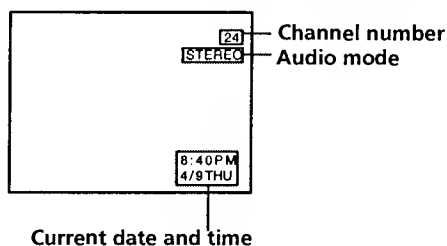


## Displaying on-screen information

\* Press DISPLAY to turn the display on or off.

The channel number, date and time, audio mode are displayed.

Press DISPLAY repeatedly to scroll between XDS ON, CAPTION, and DISPLAY OFF. For more information on XDS and CAPTION, see page 39.




To make the indications disappear, press DISPLAY repeatedly until "DISPLAY OFF" appears.

## Watching a video input signal through the line input jacks

Press INPUT SELECT repeatedly until the desired input indicator appears.

To return to the normal TV picture, press INPUT SELECT until the channel number appears. For more information on using the line input jacks, see page 47.

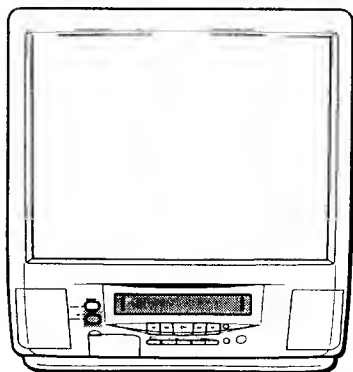
## Listening with headphones

Plug the headphones (not supplied) into the  (headphones) jack which is located inside the cover on the front of the Video/TV.

The sound from the speaker is turned off.



# Playing a Tape



This section shows you how to insert a video cassette and to play it. For more information on using the advanced features, see "Additional Operations" on pages 36 through 47.

## Inserting a video cassette

Gently insert a cassette with the arrow indication facing upwards. The cassette is automatically loaded into the cassette compartment and the Video/TV turns on. If you insert a cassette without a safety tab, playback automatically starts.

## Ejecting a video cassette

Press EJECT ▲.

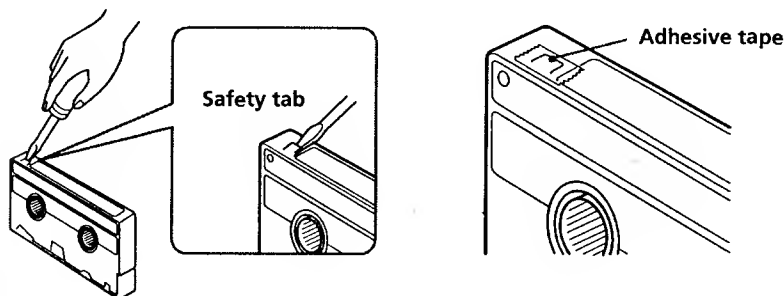
You can eject the cassette even if the power is in standby mode.

## Protecting your cassette against accidental erasure

The cassette has a safety tab to protect against accidentally erasing a previous recording. Break off the safety tab with a screw driver or a similar tool to prevent recording.

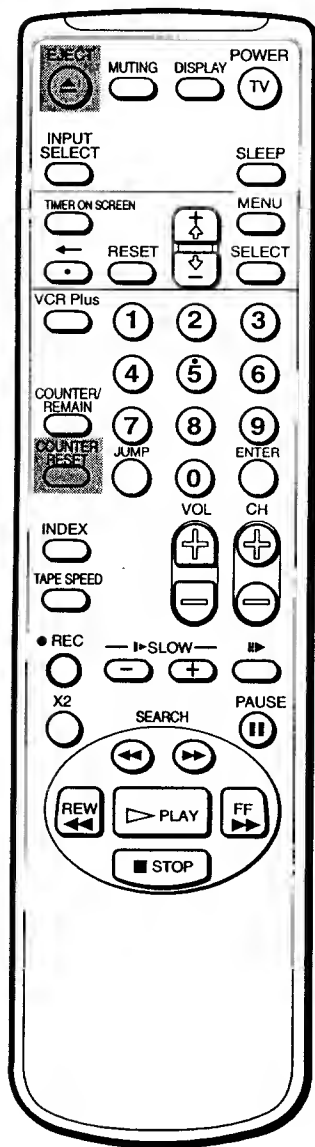
If the safety tab is removed, the cassette is ejected when you try to record on it.

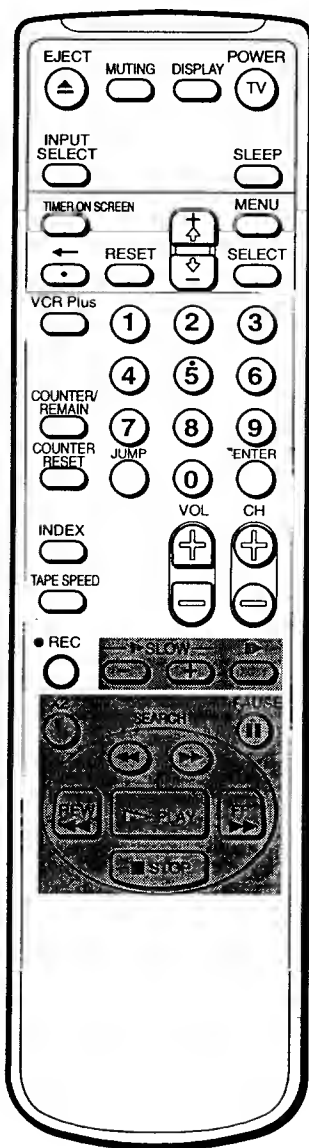
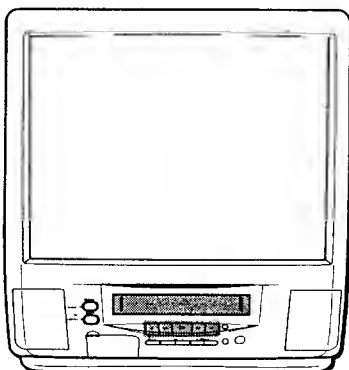
To record on a cassette with the safety tab broken off, simply cover the tab hole with adhesive tape.



## Resetting the tape counter

The tape counter helps you to locate a certain scene after playback. Press COUNTER RESET on the remote control to set the counter to "00:00:00" before playing the tape. The tape counter is automatically reset to "00:00:00" whenever a cassette is inserted. The Video/TV keeps counting the length of the tape being played. Note, however, that the tape counter does not count the portions without video signals recorded.





#### Notes

- The sound is muted during all operations except for normal playback.
- If the OFF timer is activated during playback, playback stops.

## Playing a tape

- 1 Insert the tape.  
The Video/TV automatically turns on. If you insert a cassette without a safety tab, playback automatically begins.
- 2 Press PLAY ▷.  
Playback begins. On screen-information automatically disappears after several seconds.

### To stop playback

Press STOP ■.

The Video/TV returns to the normal TV picture.

### To stop playback for a moment

Press PAUSE ||. The picture pauses.

Press PAUSE || again or press PLAY ▷ to resume playback.

If you leave your Video/TV in pause mode, normal playback resumes after about 5 minutes.

### To fast forward the tape

Press STOP ■, then press FF ►►.

### To rewind the tape

Press STOP ■, then press REW ◀◀.

### To view a tape at high speed

During playback, press and hold REW ◀◀ (rewind) or FF ►► (fast forward). A high-speed picture appears on the TV screen.

To resume normal playback, release the button.

### To view the picture while in fast forward or rewind mode

Press and hold FF ►► during fast forward or REW ◀◀ during rewind.

The picture appears on the screen.

When you release the button, fast forward or rewind mode is resumed.

### To view the picture at high speed

During playback, press SEARCH ►► or SEARCH ◀◀.

### To view the picture at twice the normal speed

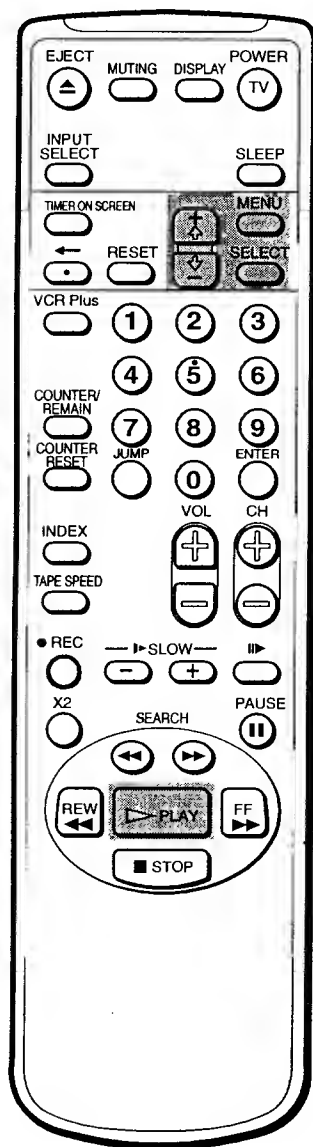
During playback, press X2.

### To view the picture in slow motion

During playback, press SLOW ►► +/-.

### To playback frame by frame

Press PAUSE || during normal playback, then press ||► (frame).

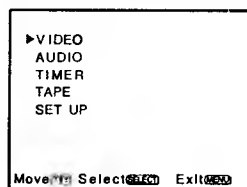


## Playing a tape repeatedly – AUTO REPEAT

You can play the recorded portion of a tape repeatedly.

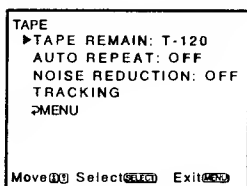
- 1 Press MENU.

The main menu appears.



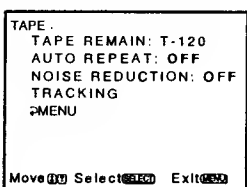
- 2 Move the cursor (▶) to "TAPE" with + ◀ or – ▶ and press SELECT.

The TAPE menu appears.

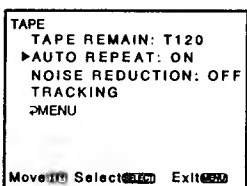


- 3 Move the cursor (▶) to "AUTO REPEAT" with + ◀ or – ▶ and press SELECT.

The selected position turns red.



- 4 Using + ◀ or – ▶, select "ON" and press SELECT.



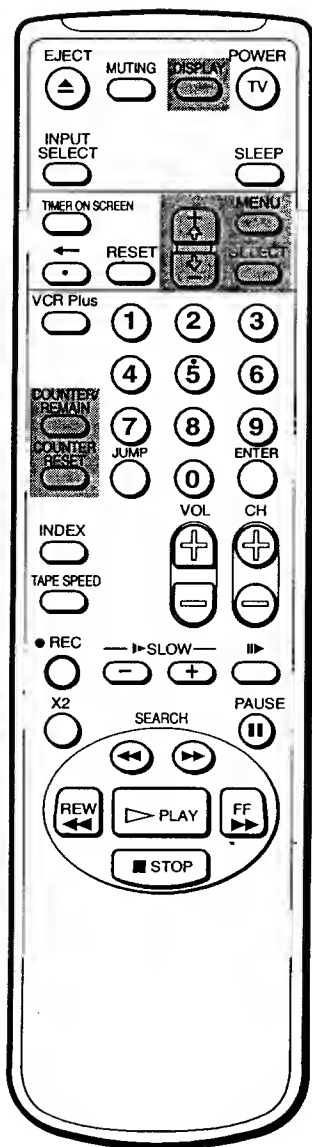
- 5 Press MENU to return to the original screen.

- 6 Press PLAY ▶.

Playback begins. When the tape reaches the end, it will automatically rewind and begin playing again.

### Note

If you eject the cassette tape or turn off the power, AUTO REPEAT will return to OFF.



#### Notes

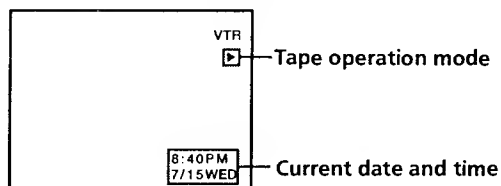
- The tape operation mode is displayed on the screen whenever you change the mode.
- If you are rewinding a tape and the time counter is displayed on the screen, the tape will stop when the counter reaches "00:00:00." Use this function to search for the beginning of a recording.

## Displaying on-screen information

\* Press DISPLAY to turn the display on or off.

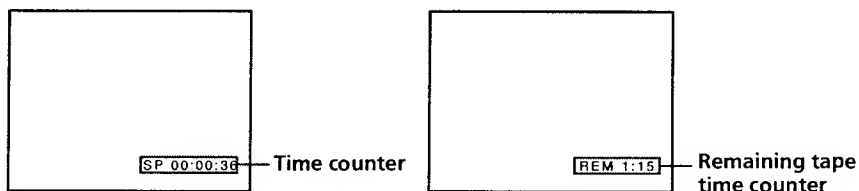
The date and time, tape operation mode is displayed.

Press DISPLAY repeatedly to scroll between XDS ON, CAPTION, and DISPLAY OFF. For more information on XDS and CAPTION, see page 39.



## Displaying the tape counter

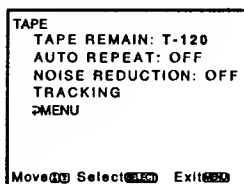
Press COUNTER/REMAIN to display the tape counter. The tape counter shows the tape travel time in hours, minutes and seconds during recording or playback. Each time you press COUNTER/REMAIN, the time counter and the remaining tape time counter appears alternately. Press COUNTER RESET to restore the counter to "00:00:00."



When you use a 2-hour (120 minute) tape, set TAPE REMAIN to T-120. When you use a tape longer than 120 minutes, set TAPE REMAIN to OTHERS.

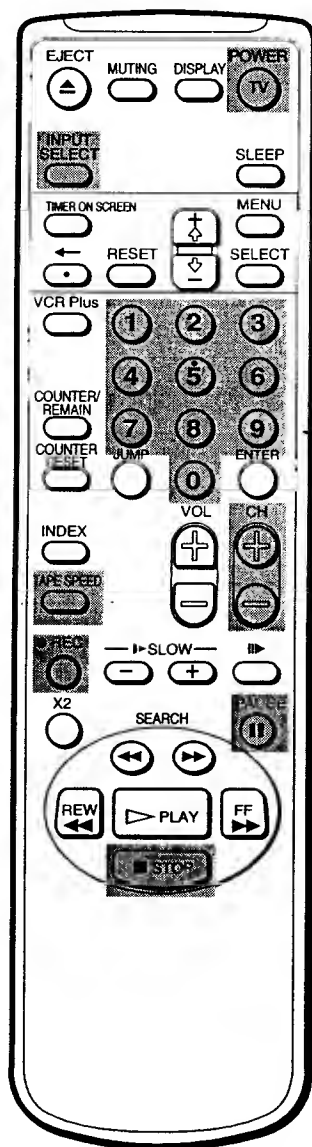
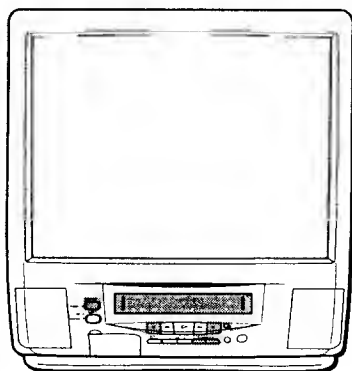
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TAPE" with + ⬆ or - ⬇ and press SELECT.
- 3 Move the cursor (▶) to "TAPE REMAIN" with + ⬆ or - ⬇ and press SELECT.

The selected position turns red.



- 4 Using + ⬆ or - ⬇, select "T-120" (the factory setting) or "OTHERS" and press SELECT.
- 5 Press MENU to return to the original screen.

# Recording TV Programs



## Note

If the ON or OFF timer is activated during recording, the TV screen turns on or off, but the recording continues.

## Recording TV programs

### Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission and/or program owner.

- 1 Insert a cassette with a safety tab.  
The Video/TV turns on automatically.
- 2 Press INPUT SELECT until a channel number appears on the screen.  
To record from a cable box, turn it on.
- 3 Press TAPE SPEED to select the recording speed, SP (Standard Play), or EP (Extended Play). Recording in EP mode will extend the length of your tape.  
Maximum recording time  
SP mode: 2 hours 40 minutes with T-160  
EP mode: 8 hours with T-160
- 4 Select the channel with CH +/- . You can also use the 0-9 buttons on the remote control. To enter double-digit numbers (such as 24), first press 2, then press 4.
- 5 Press REC ●.  
The REC lamp on the front of the Video/TV lights up and recording begins.

## To stop recording

Press STOP ■.

When the tape reaches the end, it stops and ejects the cassette.

## To pause recording

Press PAUSE II.

To resume recording, press PAUSE II again.

You can cut out an unwanted scene during recording with this button.

- 1 Press PAUSE II when an unwanted scene appears on the screen.  
Recording pauses.
- 2 Press PAUSE II again to release the pause mode at the desired scene.  
Recording resumes from the point set in step 2.

When the recording pause mode is left on for more than 5 minutes, the Video/TV stops recording.

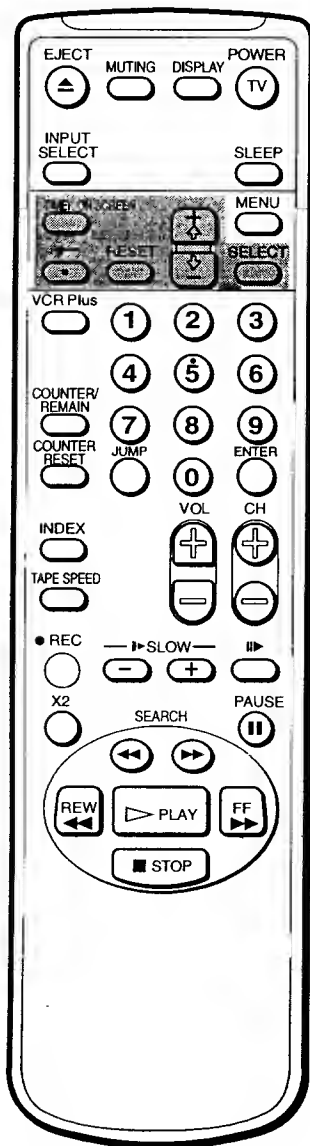
## Recording with the TV off

Press POWER.

The TV screen is turned off and the STANDBY lamp and REC lamp on the front of the Video/TV light up.

The Video/TV continues recording.

# Recording TV Programs Using the Timer



The Timer Recording function allows you to preset your Video/TV to record up to six programs within a one-month period.

## Before you begin

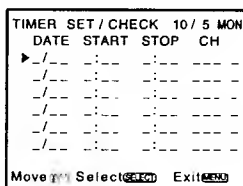
- Make sure that the time and date clock are set. If not, the message "Please set the clock first" is displayed on the screen. Refer to "Setting the Clock" on page 12.
- Make sure that the loaded cassette has its safety tab. If a cassette without safety tab is loaded, the message "Please insert a recordable tape" is displayed.

## Setting the timer

Here's an example of how to record a program broadcast on channel 26 from 8:15 PM to 9:55 PM on Tuesday, 6th of October 1998, in EP mode.

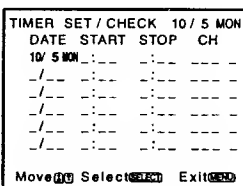
### 1 Press TIMER ON SCREEN.

The TIMER SET/CHECK menu appears.



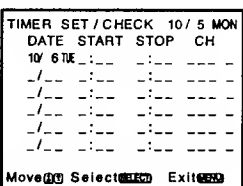
### 2 Press SELECT.

Today's date and the day of the week appears in red.



### 3 Press + ⬆ until "6 TUE" appears.

For daily and weekly recording see "Daily/weekly recording" on page 32.



#### If you have made a mistake

Press ⬅ to return to the previous position and correct the setting.

#### To erase the settings

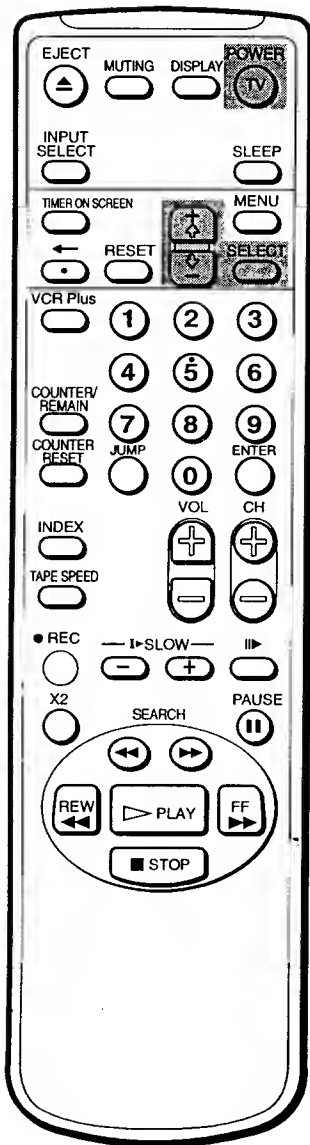
Press RESET while displaying the TIMER SET/CHECK menu.

#### If you try to enter a recording start time that is prior to the current time

All of the items of the recording settings are erased.

#### If you set MTS to "SAP" in the AUDIO menu (KV-20VS40 only)

The SAP signal will be recorded only if a SAP signal is being broadcast. Otherwise, the program's primary audio channel will be recorded (stereo or mono.) See page 22 for a table describing the relation between the speakers and the source signal.



**If you try to do an incorrect operation**

The Video/TV displays a message on the screen and interrupts the operation.

**When the ON timer overlaps a timer program**

- If the start time of the ON timer is the same or earlier than that of a timer recording program, the ON timer activates and the timer recording does not operate.
- If the start time of the ON timer is later than that of a timer recording program, the TV screen turns on at the ON timer start time, and the recording continues.

- 4** Press SELECT, then set the hour of the recording start time to "8" with + ⬆ or - ⬇.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
10 / 6 TUE	8 : _	_	_	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
/	/	/	/	
Move [Left] Select [Enter] Exit [Exit]				

- 5** Press SELECT, then set the minute of the recording start time to "15" with + ⬆ or - ⬇.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
10 / 6 TUE	8 : 15 PM	_ :	_ :	_
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
Move[←] Select[ENTER] Exit[EXIT]				

- 6** Press SELECT, then set the hour of the recording stop time to "9" with + ⬆ or - ⬇.

TIMER SET / CHECK 10 / 5 MON				
DATE		START	STOP	CH
10 / 6 TUE		8 : 15 PM	9 : _ PM _	
/	_	:	:	_
/	_	:	:	_
/	_	:	:	_
/	_	:	:	_
/	_	:	:	_
Move [Left] Select [Enter] Exit [Exit]				

- 7** Press SELECT, then set the minute of the recording stop time to "55" with + ⬆ or - ⬇.

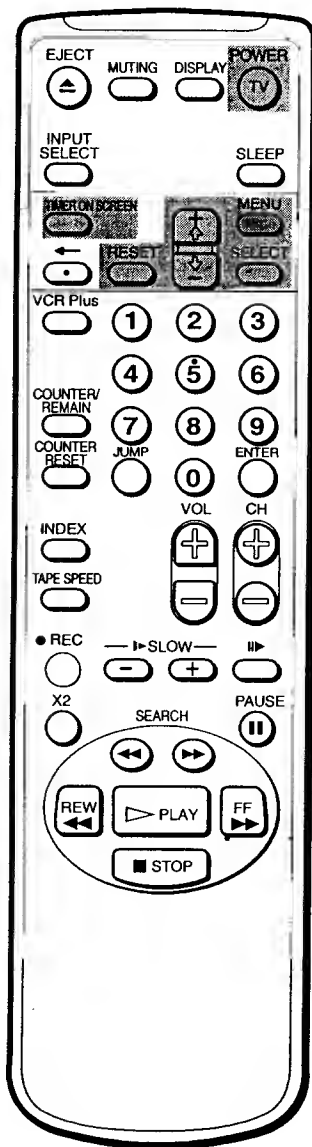
TIMER SET / CHECK 10 / 5 MON				
DATE		START	STOP	CH
10 / 6	TUE	8 : 15 PM	9 : 55 PM	___
/	:	:	:	:
/	:	:	:	:
/	:	:	:	:
/	:	:	:	:
/	:	:	:	:
Move [Left] Select [Enter] Exit [Exit]				

- 8** Press SELECT, then set the channel to "26" with + ⬆ or - ⬇.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
10 / 8 TUE	8 : 15 PM	9 : 55 PM	26 _	
/ _	: _	: _	_ _	
/ _	: _	: _	_ _	
/ _	: _	: _	_ _	
/ _	: _	: _	_ _	
/ _	: _	: _	_ _	
Move [Left] Select [Enter] Exit [Exit]				

- 9** Press SELECT, then set the recording speed to EP with + ⬆ or - ⬇.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
10 / 8 TUE	8 : 15 PM	9 : 55 PM	28 @	
/	:	:		
/	:	:		
/	:	:		
/	:	:		
/	:	:		
/	:	:		
Move [Left] Select [Enter] Exit [Exit]				



#### 10 Press SELECT.

The message "Please turn TV off to set timer" is displayed for three seconds. Then the TIMER SET/CHECK menu reappears and the cursor (►) is displayed at the left margin.

#### 11 When you want to set other programs, press - ◀ to move the cursor (►) to the next line, then repeat steps 2 through 10.

#### 12 Press MENU to exit the TIMER SET/CHECK menu.

#### 13 Press POWER to turn off the Video/TV.

The TIMER REC lamp on the front of the Video/TV lights up and the Video/TV enters recording standby mode.

The Video/TV turns on automatically and starts recording at the preset start time, and the TIMER REC lamp on the front of the Video/TV lights up.

### Daily/weekly recording

You can preset your Video/TV to record the same program every day of the week (daily recording) or the same program on the same day every week (weekly recording). Press - ◀ in step 3 until the desired setting appears in the "DATE" position. With each press, the setting changes as follows:

4 (today) → SUN-SAT → MON-FRI → EVERY SAT → EVERY FRI → EVERY THU → EVERY WED → EVERY TUE → EVERY MON → EVERY SUN → 3 (next month) → 2.....

### To cancel timer recording

- 1 Press POWER to turn on the Video/TV.
- 2 Press TIMER ON SCREEN.
- 3 Using + ◀ or - ▶, select the timer setting which you want to stop recording and press RESET.

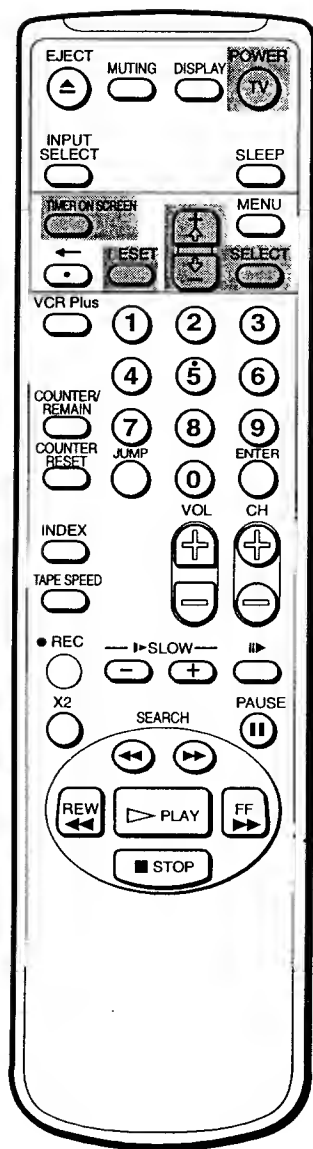
#### When preset timer recordings overlap

- If the turn-on time of two programs are the same, the program listed first in the menu has priority.
- If the recording start time of the second program comes before recording of the first program is over, the second program starts recording only after the first program has finished.

### Using the Video/TV before timer recording starts

To use the Video/TV before timer recording begins, just press POWER. The TIMER REC lamp turns off and the Video/TV switches on.





## Checking the timer settings

You can display the list of the timer settings which you preset.

Press **TIMER ON SCREEN**.

The **TIMER SET/CHECK** menu appears.

TIMER SET/CHECK 10 / 5 MON				
DATE	START	STOP	CH	
▶ 10/ 6 TUE	8:15 PM	9:55 PM	26 EP	
10/ 7 WED	7:30 PM	8:30 PM	50 EP	
MON- SAT	11:00 PM	12:00 AM	32 SP	
EVERY THU	9:55 AM	12:30 PM	21 EP	
/	/	/	/	
/	/	/	/	
Move [left] Select [right] Exit [power]				

Press **TIMER ON SCREEN** again to erase the **TIMER SET/CHECK** menu.

## Changing or cancelling the timer settings

- 1 Press **TIMER ON SCREEN** to display the **TIMER SET/CHECK** menu.
- 2 Select the setting you want to change or cancel with **+** **⬆** or **⬇**.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
10/ 6 TUE	8:15 PM	9:55 PM	26 EP	
▶ 10/ 7 WED	7:30 PM	8:30 PM	50 EP	
MON- SAT	11:00 PM	12:00 AM	32 SP	
EVERY THU	9:55 AM	12:30 PM	21 EP	
/	/	/	/	
/	/	/	/	
Move [left] Select [right] Exit [power]				

### 3 To change the setting

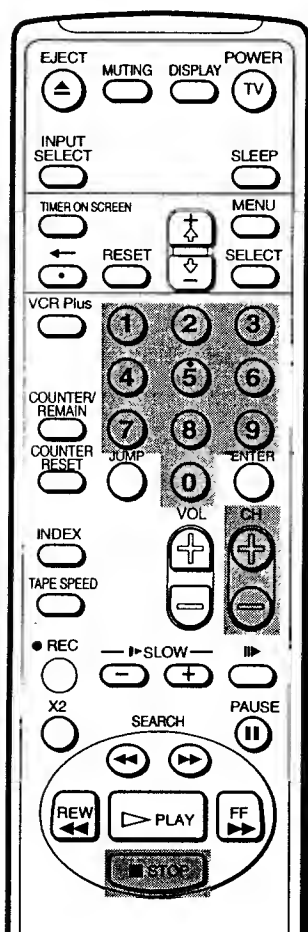
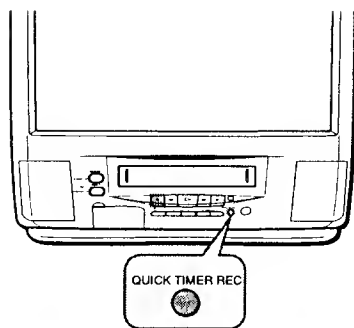
Using **+** **⬆** or **⬇** and **SELECT**, re-enter the items you want to change.

Refer to steps 2 through 10 of "Setting the timer" on pages 30 through 32.

### To cancel the setting

Press **RESET**.

- 4 Press **TIMER ON SCREEN** to return to the original screen.
- 5 If there are other timer settings on the list, press **POWER** to set the Video/TV to timer recording standby mode.



## Recording using QUICK TIMER

You can preset your Video/TV to start recording immediately and to automatically stop recording after a specific time period. Even if you have not set the clock, QUICK TIMER recording can be used.

### To record

- 1 Insert a cassette with its safety tab intact.
- 2 Select the channel which you want to record with the 0-9 buttons or CH +/-.
- 3 Press QUICK TIMER REC on the front of the Video/TV.  
"QUICK TIMER 0:00" appears on the screen.
- 4 Press QUICK TIMER REC repeatedly to select the recording time period. With each press, the time period changes as follows:

0:00 → 0:30 → 1:00 → .... → 7:30 → 8:00

 A horizontal sequence of time periods: 0:00 → 0:30 → 1:00 → .... → 7:30 → 8:00. A bracket underneath the sequence indicates the range of time periods available.

The time period turns yellow and recording starts. Even if you switch off the Video/TV, it continues recording. When the preset time period has elapsed, the Video/TV stops recording.

### To stop QUICK TIMER recording

Press STOP ■ or QUICK TIMER REC repeatedly until "QUICK TIMER 0:00" appears on the screen.

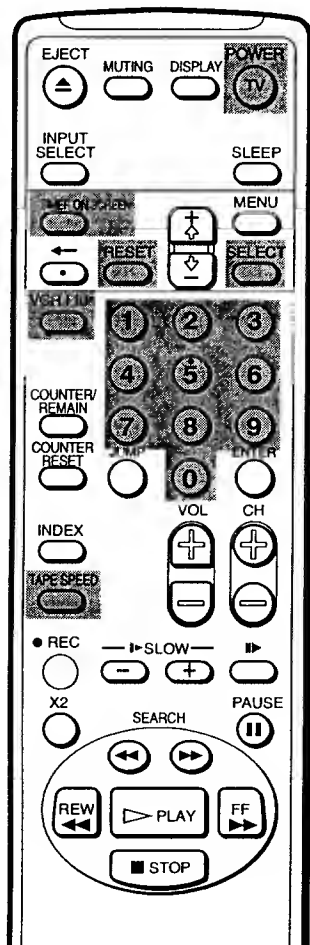
#### To change the recording time period after QUICK TIMER recording begins

Press QUICK TIMER REC until the desired time period appears.

#### Note

If the OFF timer is activated during quick timer recording, the TV screen turns off, but the quick timer recording continues.

# Recording TV Programs Using VCR Plus+



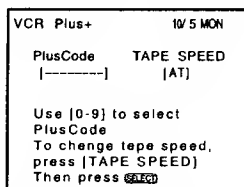
## How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is look up the program's "PlusCode," a number assigned to each program published in the TV section of most newspapers, cable TV listings, and even TV GUIDE magazine. Then, just enter the Plus Code of the program you want and the VCR is automatically programmed to record that show. It's that simple. You can preset up to six programs within a one month time frame. To take advantage of this function, you must first set up your Video/TV and assign channel positions to the various guide channels. For details, see "Setting Up VCR Plus+" on page 16.

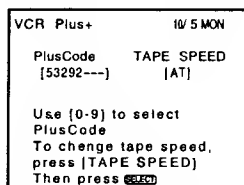
## Before you begin

- Make sure that the time and date are set correctly. If not, refer to "Setting the Clock" on page 12.
- Make sure that the loaded cassette has its safety tab intact.

- 1 Press VCR plus.  
The VCR Plus+ menu appears.



- 2 Press the 0-9 buttons to enter the desired program's PlusCode.



### Example of "PlusCode"

	PlusCode
5:30 MOVIE—Musical(2hrs.)	[33044]
SPORT—Golf(1hr.25min.)	42060
—WS 9974	
6:30 DRAMA—Comedy(2hrs.)	17390
SCIENCE AND TECHNOLOGY	
(1hrs.15min.)	73457

### If you have made a mistake entering program's PlusCode

Press RESET and re-enter the correct number.

### To check the timer setting

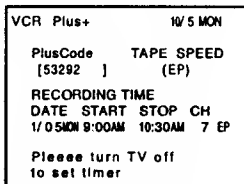
Press TIMER ON SCREEN. You can check the list of the timer settings.

### The timer will not accept a setting in the following cases:

- When you enter the PlusCode of a program that has already ended.
- When you enter the PlusCode of a program that has already been set to record.
- If the 6 programs have already been preset, "6 programs have already been set" appears on the screen.

- 3 Press TAPE SPEED repeatedly to select SP, EP, or AT (automatic tape speed) and press SELECT. AT will automatically adjust the tape speed between SP and EP so that the program you selected fits in the tape. (Note that recording may stop if the tape is not long enough to record the program in EP mode.)

The recording information (date, start and stop times, channel number, and tape speed) appears in green.

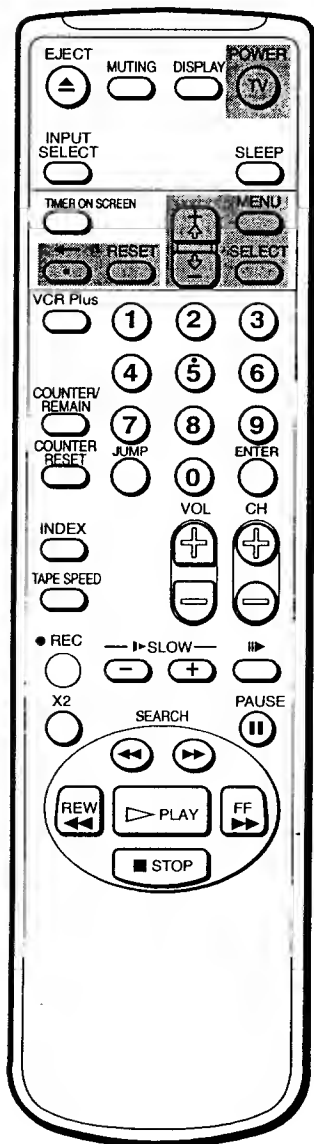


Check that the information is correct. If it is not, press RESET to cancel the setting.

- 4 Repeat steps 2 to 3 to preset another timer setting.

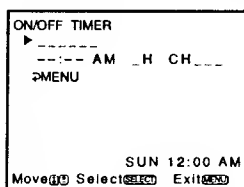
- 5 Press POWER to turn the Video/TV off.  
The TIMER REC lamp on the front of the Video/TV lights up and the Video/TV enters recording standby mode.

# Automatically Switching the Video/TV On or Off – ON/OFF TIMER

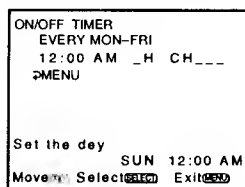


You can set the Video/TV to turn on and off at any time. Make sure the clock is set correctly. If it is not, set the clock first (page 12).

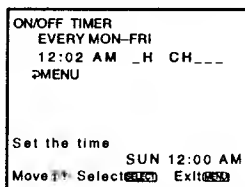
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TIMER" with + ◀ or ▶ and press SELECT. The TIMER menu appears.
- 3 Move the cursor (▶) to "ON/OFF TIMER" with + ◀ or ▶ and press SELECT. The ON/OFF TIMER menu appears.



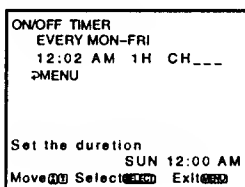
- 4 Press SELECT to enter the ON/OFF TIMER setting.
- 5 Press + ◀ or ▶ to set the day(s), and press SELECT. Each time you press + ◀ or ▶, the days change as shown below. EVERY SUN-SAT → EVERY MON-FRI → SUNDAY ... → SATURDAY → EVERY SUNDAY ... → EVERY SATURDAY.



- 6 Press + ◀ or ▶ to set the time (hour then minute) that you want the Video/TV to turn on and press SELECT.



- 7 Press + ◀ or ▶ to set the duration time and press SELECT. With each press, the duration increases by one hour for up to twelve hours.



## If you have made a mistake

Press ◀ to return to the previous position.

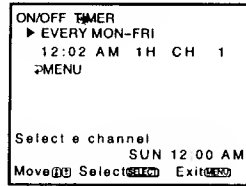
## To erase the settings

Press RESET while the ON/OFF timer menu is displayed.

## Note

If the OFF timer is activated during quick timer recording, the TV screen turns off, but the quick timer recording continues.

- 8 Press +  $\uparrow$  or -  $\downarrow$  to set the channel and press SELECT.

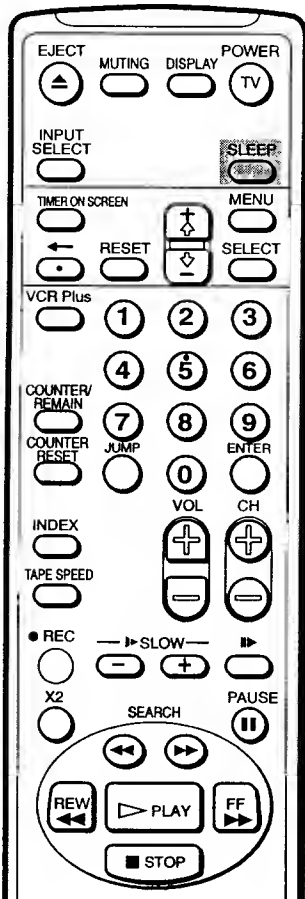


- 9 Press MENU to return to the original screen.

If you are not using the Video/TV, press POWER to set the Video/TV in standby mode.

One minute before the Video/TV turns off, the message "TV will turn off soon" appears on the screen.

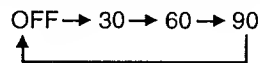
## Switching Off Automatically – Sleep Timer



You can automatically switch the Video/TV into standby mode after a selected time period.

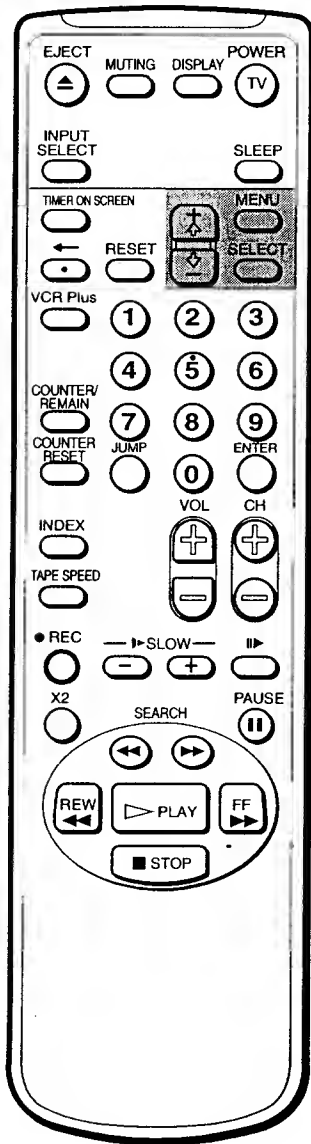
Press SLEEP.

With each press, the time period (in minutes) changes as follows:



One minute before the TV switches into standby mode, the message "TV will turn off soon" is displayed on the screen.

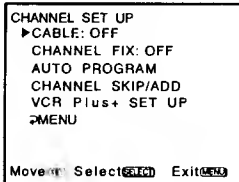
# Selecting the Video/TV's Cable Box Input Channel – CHANNEL FIX



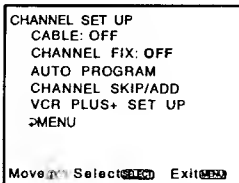
Use the CHANNEL FIX feature to prevent the Video/TV's input channel from being accidentally changed.

It is recommended that you set up your Video/TV as follows when you connect a cable box.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or – ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or – ▶ and press SELECT. The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to "CHANNEL FIX" with + ◀ or – ▶ and press SELECT. The selected position turns red.



- 5 Using + ◀ or – ▶, select the Video/TV's cable box input channel that you want to set and press SELECT. With each press, the input mode changes as follows:

OFF → 2 → 3 → 4 → 5 → 6 → LINE  
 ↑

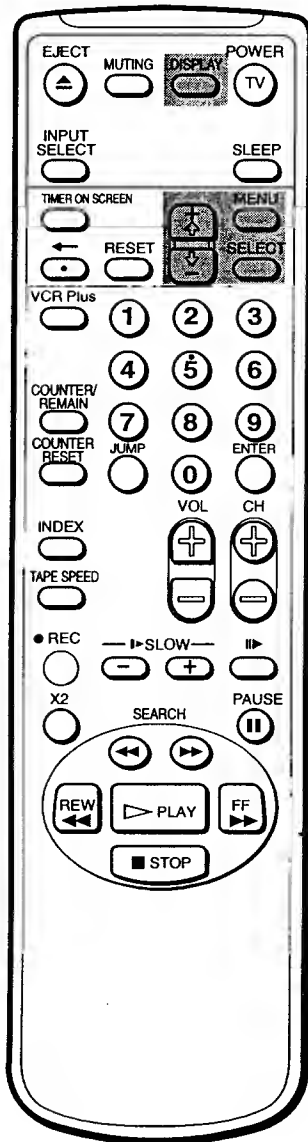
When you set CHANNEL FIX to "2-6," you can only watch the TV channel that you have fixed, or the input line.

When you set CHANNEL FIX to "LINE," you cannot switch the line input to a TV channel.

When you want to switch CHANNEL FIX off, set it to "OFF."

- 6 Press MENU to return to the original screen.

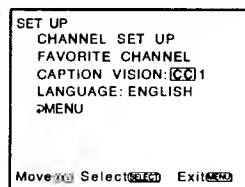
# Displaying Caption Vision/XDS



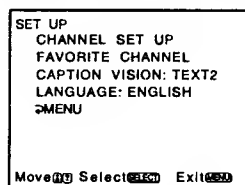
Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, TEXT1, or TEXT2 from the menu. CC1 or CC2 shows you an on-screen version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1 or TEXT2 shows you on-screen information presented using either half or the whole screen. It is not usually related to the program.

Some programs are broadcast with XDS (Extended Data Service) which shows a network name, program name, program length, call letters and time of the show. When you select XDS with the DISPLAY button, this information will be displayed on the screen if the broadcaster offers this service.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to "CAPTION VISION" with + ◀ or ▶ and press SELECT. The caption setting turns red.



- 4 Using + ◀ or ▶, select the caption type you want and press SELECT.



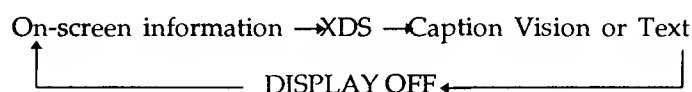
- 5 Press MENU to return to the original screen.

## Note

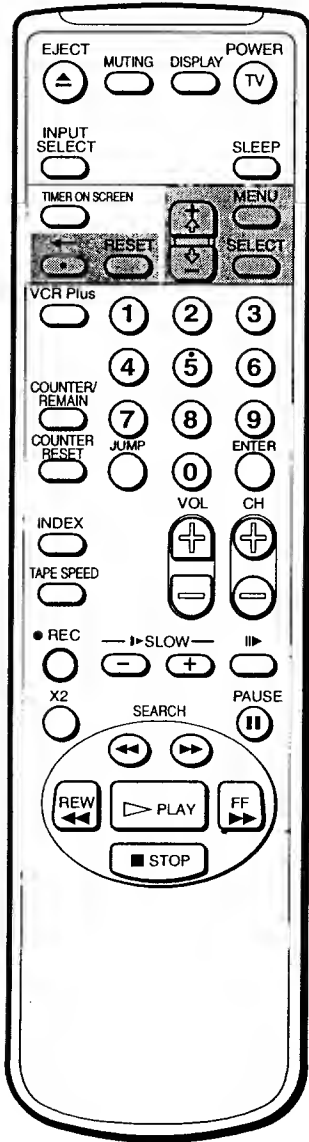
Poor reception of TV programs can cause errors in Caption Vision. Captions may appear with errors instead of the correct words.

## To cancel caption display

Press DISPLAY repeatedly until "DISPLAY OFF" appears on the screen. With each press, the display changes as follows:



# Blocking Out a Channel – CHANNEL BLOCK



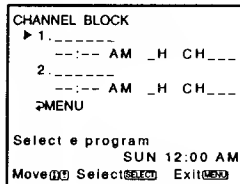
**If you have made a mistake**  
Press **←** to return to the previous position.

**To erase the setting**  
Press RESET while the CHANNEL BLOCK menu is displayed.

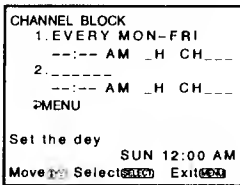
The CHANNEL BLOCK feature allows you to prevent children from watching unsuitable programs. Make sure the clock is set correctly. If it is not, set the clock first (page 12.)

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TIMER" with + ◀ or – ▶ and press SELECT.
- 3 Move the cursor (▶) to "CHANNEL BLOCK" with + ◀ or – ▶ and press SELECT.

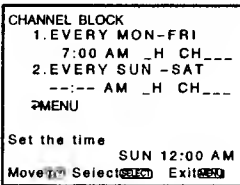
The CHANNEL BLOCK menu appears.



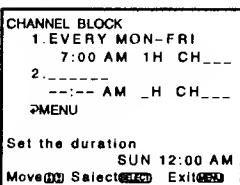
- 4 Press SELECT to enter the CHANNEL BLOCK setting.
- 5 Press + ◀ or – ▶ to set the days.  
With each press, the days change as shown below.  
EVERY SUN-SAT → EVERY MON-FRI → SUNDAY ... → SATURDAY  
→ EVERY SUNDAY ... → EVERY SATURDAY.



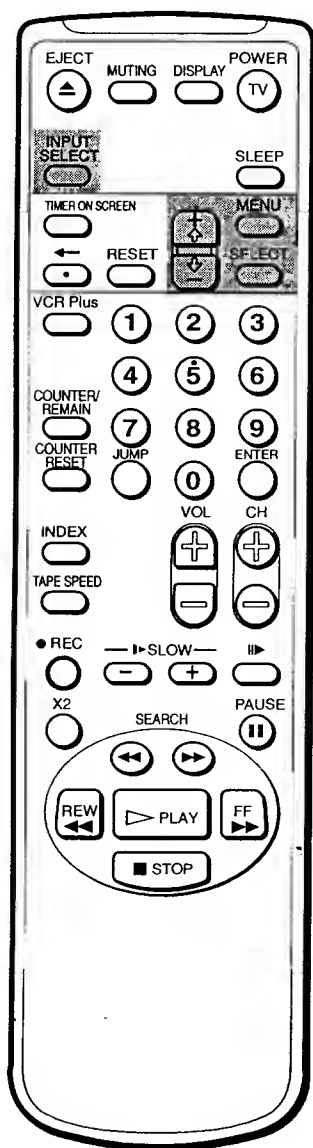
- 6 Press + ◀ or – ▶ to set the time (hour then minute) that you want to block out and press SELECT.



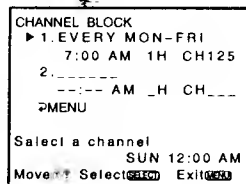
- 7 Press + ◀ or – ▶ to set the duration time that you want to block and press SELECT.







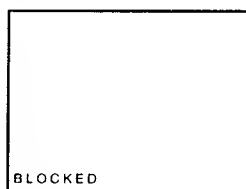
- 8** Press +  $\uparrow$  or -  $\downarrow$  to set the channel that you want to block out and press SELECT.



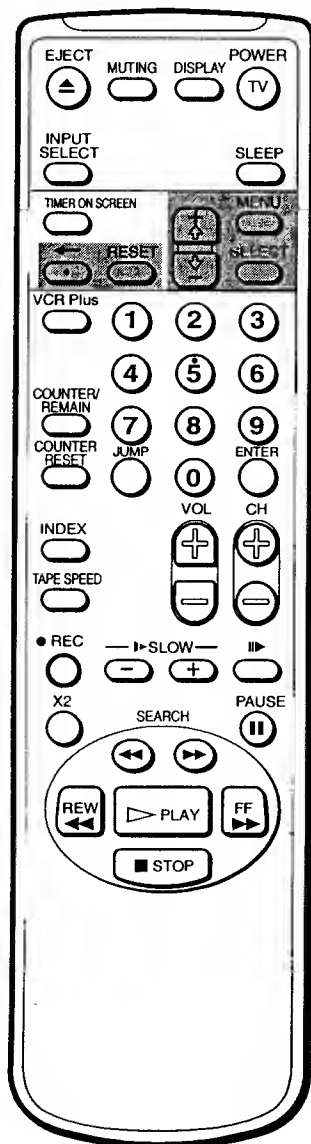
- 9** To set another program, press -  $\downarrow$  to move the cursor (►) to the next line, then repeat steps 4 through 8.

- 10** Press MENU to return to the original screen.

If you try to select a channel during the time that it is blocked, the message "BLOCKED" appears and the picture is blocked and the sound is muted.

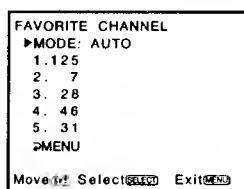


# Setting Your Favorite Channels – FAVORITE CHANNEL

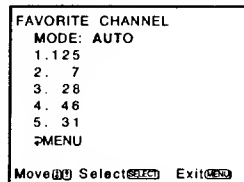


The FAVORITE CHANNEL feature allows your Video/TV to memorize the channels that you watch the most. If the feature is set to AUTO, the last five channels you selected with the 0-9 buttons are automatically set as your favorite channels. If you want to input your own selection of channels, set the feature to MANUAL.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or – ▶ and press SELECT.
- 3 Move the cursor (▶) to "FAVORITE CHANNEL" with + ◀ or – ▶ and press SELECT.  
The FAVORITE CHANNEL menu appears.



- 4 Press SELECT to set the mode.  
The MODE position turns red.



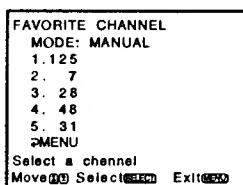
- 5 Select "AUTO" or "MANUAL" with + ◀ or – ▶ and press SELECT.  
If you select AUTO, skip steps 6 through 8. The last five channels you selected with the 0-9 buttons are automatically set as your favorite channels.

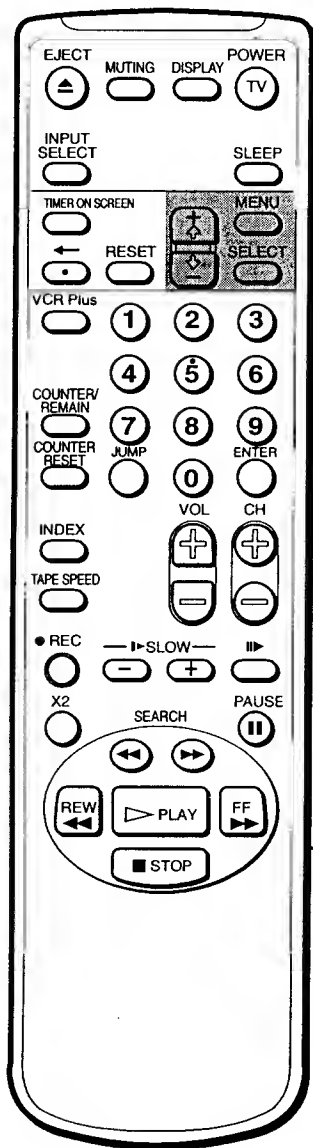
If you select MANUAL, the favorite channel numbers become white, indicating that favorite channels can be entered.

**If you have made a mistake**  
Press ◀ to return to the previous position.

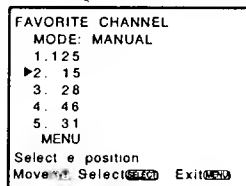
**To erase the settings**  
Press RESET while the FAVORITE CHANNEL menu is displayed.

- 6 Move the cursor (▶) with + ◀ or – ▶ to select a channel and press SELECT.  
The selected position turns red.





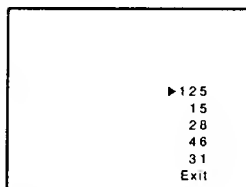
- 7 Using +  $\uparrow$  or -  $\downarrow$ , select the channel that you want to set as your favorite channel and press SELECT.



- 8 Repeat steps 6 and 7 to set the other favorite channels.
- 9 Press MENU to return to the original screen.

## Selecting your favorite channels

- 1 Press SELECT.  
The favorite channels menu appears.

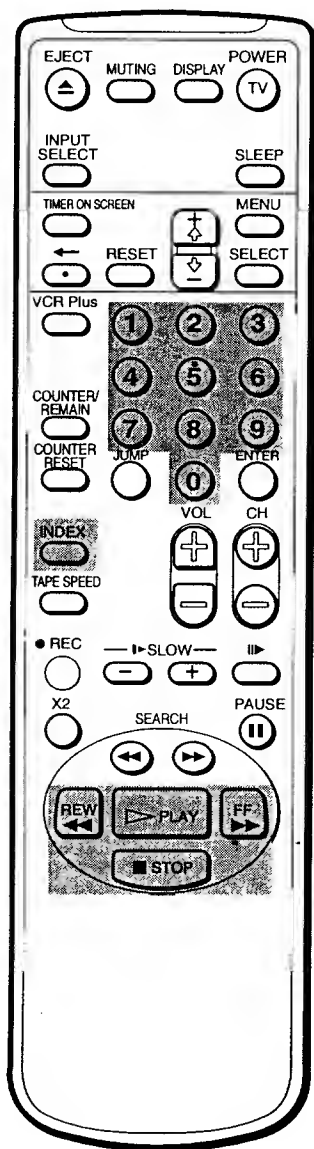


- 2 Move the cursor (►) with +  $\uparrow$  or -  $\downarrow$  to select the channel you want to watch and press SELECT.  
The selected channel will appear on the screen.

## To exit the favorite channel menu

Press +  $\uparrow$  or -  $\downarrow$  to select "Exit" and press SELECT.

# Searching Using the Index Function

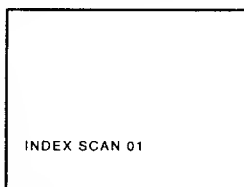


**To stop searching**  
Press STOP ■.

The Video/TV automatically marks the tape with an index signal at the point where each recording begins. These signals can be used to find a specific recording.

## Playing back to the beginning of each program – Index Scan

- 1 Insert a tape with index signals.
- 2 Press INDEX once during playback.
- 3 Press ►► FF or ◀◀ REW to search for individual programs ahead or behind the current position.  
The tape rewinds or rapidly advances to the next index signal. Each time an index signal is detected, the index scan number appears and the tape plays for about 5 seconds, then rewinds or rapidly advances to the next index signal.

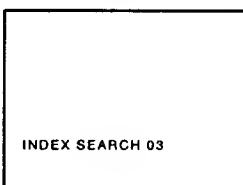


- 4 Press PLAY ▷ at the desired program.

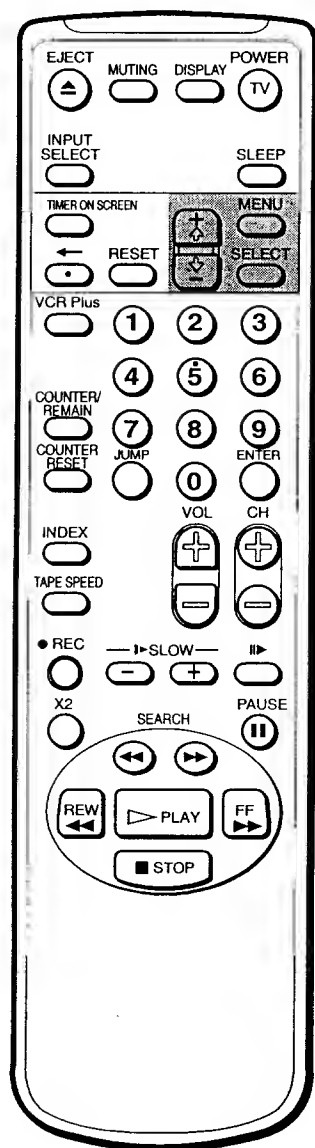
## Locating the desired program – Index Search

You can locate a desired program and play it back by designating how many index signals to skip ahead or behind the current position.

- 1 Insert a cassette with index signals.
- 2 Press INDEX.
- 3 Using the 0-9 buttons, enter the number of index signals you want to skip. For example, if the tape at INDEX 02 and you want to locate INDEX 05, press 0 and 3.
- 4 Press ►► FF or ◀◀ REW to begin the search for the program ahead or behind the current position.  
"INDEX SEARCH 03" appears on the screen. When the desired signal is found, playback begins automatically.



# Enhancing Video Picture Quality



## To return to automatic tracking

Set AUTO to ON in the TRACKING menu with + or - and press SELECT.

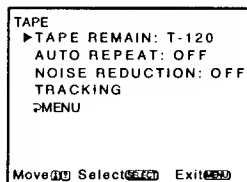
## Adjusting the tracking automatically

The tracking condition is automatically adjusted on this Video/TV. The AUTO TRACKING indicator will appear for three seconds while the Video/TV is searching for the best tracking condition.

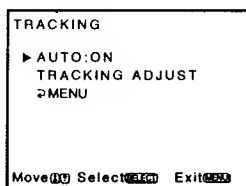
## Adjusting the tracking manually

If streaks or snow noise appear on the screen during normal playback or slow picture, adjust the picture tracking condition manually.

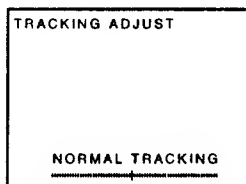
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TAPE" with + or - and press SELECT. The TAPE menu appears.



- 3 Move the cursor (▶) to "TRACKING" with + or - and press SELECT. The TRACKING menu appears.

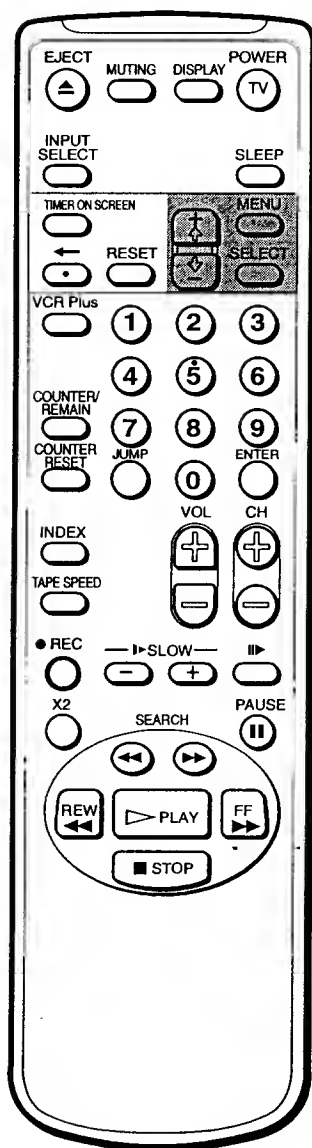


- 4 Select "TRACKING ADJUST" with + or - and press SELECT. The tracking meter appears.



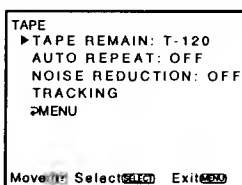
- 5 Using + or -, adjust the tracking until the picture is clear.
- 6 Press SELECT. The TRACKING menu reappears.
- 7 Press MENU to return to the original screen.

# Reducing the Picture Noise

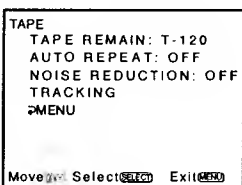


You can automatically reduce the picture noise on the video playback picture by setting NOISE REDUCTION to ON. Use this feature when you are playing a well-worn or old video, such as a rental video.

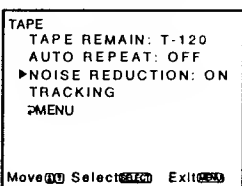
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TAPE" with + ◀ or ▶ and press SELECT. The TAPE menu appears.



- 3 Move the cursor (▶) to "NOISE REDUCTION" with + ◀ or ▶ and press SELECT. The selected position turns red.



- 4 Using + ◀ or ▶, select "ON" and press SELECT. The picture noise is reduced.

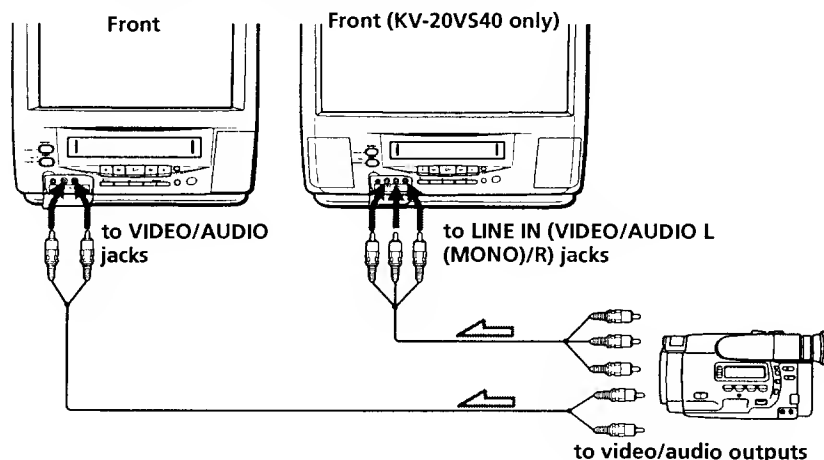


- 5 Press MENU to return to the original screen.

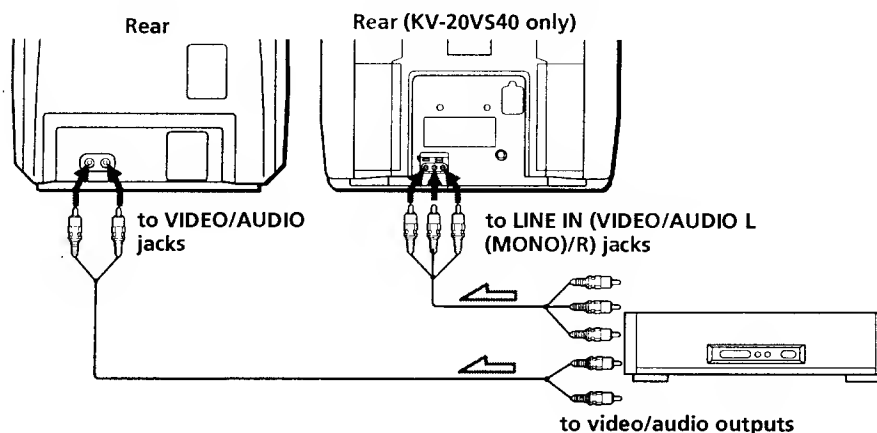
# Connecting Optional Equipment

## Watching the picture input from optional equipment

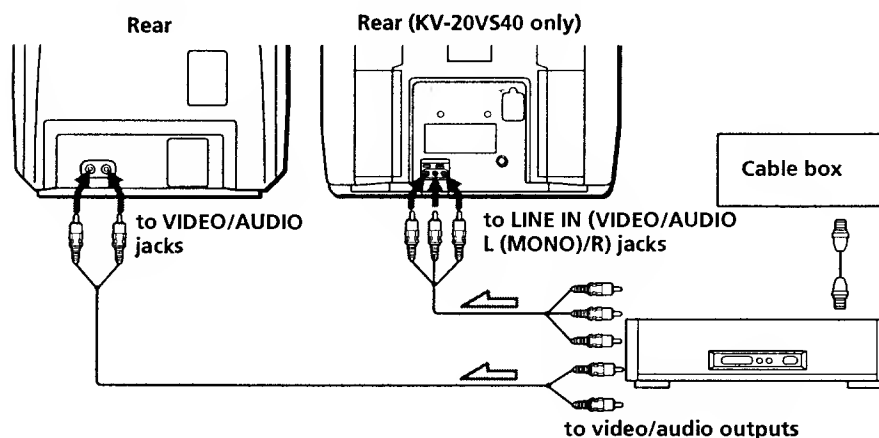
### To connect a video camera



### To connect a VCR without a cable box



### To connect a VCR with a cable box




#### Notes

- When connecting optional equipment, such as videogames, please use the connecting cables recommended by the equipment's manufacturer.
- To connect monaural video equipment, connect the audio output of the video equipment to AUDIO L (MONO) of the video TV (KV-20VS40 only).

## To watch the video input signal

Press INPUT SELECT so that "LINE" appears on the screen.

# Troubleshooting

Function	Problems	Possible causes and remedies
TV reception	No picture (screen is dark), no sound	<ul style="list-style-type: none"> <li>The AC power cord is disconnected. → Connect the AC power cord.</li> <li>The Video/TV is switched off. → Press POWER.</li> </ul>
	Good picture but no sound	<ul style="list-style-type: none"> <li>The headphones are connected to the  jack. → Disconnect the headphones.</li> <li>MUTING is displayed on the screen. → Press MUTING.</li> <li>Verify your audio mode (KV-20VS40 only). → Check the MTS setting in the AUDIO menu.</li> <li>Press VOL+.</li> <li>Check antenna/cable connections. (page 5)</li> </ul>
	No color or poor color (screen is dark) for color programs, but good sound.	<ul style="list-style-type: none"> <li>Adjust "PICTURE," "BRIGHTNESS," "COLOR," "HUE," and "SHARPNESS" in the VIDEO menu. (page 19)</li> </ul>
	No picture, no sound from video input source	<ul style="list-style-type: none"> <li>The connecting cord between the Video/TV and the input source is disconnected. → Connect it firmly.</li> <li>Input is not selected correctly. → Press INPUT SELECT until the desired input indicator appears. (page 47)</li> </ul>
	Cannot receive VHF or UHF channels when using an antenna.	<ul style="list-style-type: none"> <li>Cable setting is not correct. → Set CABLE to OFF.</li> </ul>
	TV is fixed to one channel	<ul style="list-style-type: none"> <li>Cable setting is not correct. → Set CHANNEL FIX to OFF.</li> </ul>
Clock and timer	The clock has stopped and "--/--" is displayed.	<ul style="list-style-type: none"> <li>The power has been interrupted or the AC power cord is disconnected for more than 30 minutes. → Re-set the clock and timer settings if necessary. (pages 15, 30)</li> </ul>
Playback	Power is on, but the tape does not run.	<ul style="list-style-type: none"> <li>Moisture has condensed in the Video/TV. → Turn the power off, unplug the AC power cord and leave the Video/TV for about one hour.</li> </ul>
	Poor playback picture	<ul style="list-style-type: none"> <li>Adjust the tracking. (page 45)</li> <li>The video heads are dirty. → The video heads are dirty (see below). Clean the video heads using a Sony video head cleaning cassette. If Sony cleaning cassettes are not available in your area, have the heads cleaned at your nearest Sony service facility (a standard service charge will be required). Do not use a commercially available liquid type cleaning cassette other than Sony's, as they may damage the video heads. → The video heads may have to be replaced. Consult your local Sony dealer for more information.</li> </ul>

## Symptoms caused by contaminated video heads

• Normal picture

• Rough picture

• Unclear picture

• No picture (or black &amp; white screen appears)

initial  
contamination

→ terminal



Function	Problems	Possible causes and remedies
Playback	The sound drops out.	<ul style="list-style-type: none"> <li>The tape is defective. ➔ Use a new tape.</li> </ul>
Recording	The cassette is ejected when you press REC ●.	<ul style="list-style-type: none"> <li>The safety tab of the cassette has been removed. ➔ Cover the tab hole with adhesive tape, or use another cassette with a safety tab. (page 25)</li> </ul>
	Recording does not function.	<ul style="list-style-type: none"> <li>No cassette has been inserted. ➔ Insert a cassette with the safety tab.</li> <li>The tape is at its end. ➔ Rewind the tape.</li> </ul>
Timer recording	Timer settings cannot be made.	<ul style="list-style-type: none"> <li>The clock has not been set. ➔ Set the current time and date. (page 12)</li> <li>You made a mistake when setting the timer. ➔ Check the setting steps. (pages 30 through 32)</li> </ul>
	The cassette is ejected when you press POWER to set the timer.	<ul style="list-style-type: none"> <li>The safety tab of the cassette has been removed. ➔ Cover the tab hole with adhesive tape, or use another cassette with a safety tab.</li> </ul>
	The TIMER REC lamp does not light up even though you press POWER to set the timer.	<ul style="list-style-type: none"> <li>No cassette has been inserted. ➔ Insert a cassette with its safety tab.</li> <li>No setting was made for the timer. ➔ Set the timer to record a program. (pages 30 through 32)</li> </ul>
	Timer recording was not made.	<ul style="list-style-type: none"> <li>You did not press POWER to turn off the Video/TV and set the timer.</li> <li>There has been a power interruption lasting more than 30 minutes.</li> </ul>
	No sound is recorded on the audio track.	<ul style="list-style-type: none"> <li>The Multichannel TV Sound feature was set to SAP but a SAP program was not being broadcast. (KV-20VS40 only) ➔ Set the MTS setting to STEREO or MONO.</li> </ul>
Others	A cassette cannot be inserted.	<ul style="list-style-type: none"> <li>Another cassette is already inserted. ➔ Press EJECT ▲ to eject the cassette.</li> </ul>
	The remote control does not work.	<ul style="list-style-type: none"> <li>The batteries are low. ➔ Replace the batteries. (page 4)</li> <li>The batteries are installed incorrectly. ➔ Install the batteries with correct polarities. (page 4)</li> </ul>
	The VCR does not operate.	<ul style="list-style-type: none"> <li>Moisture condensation occurred. ➔ Turn the power off, unplug the AC power cord and leave the Video/TV to dry for over one hour.</li> </ul>

# Specifications

## TV Section

Television system	American TV Standard
Channel coverage	VHF: 2-13/UHF: 14-69/ CATV: 1-125
Picture tube	KV-13VM40/41: Microblack™ Trinitron® tube KV-20VM40: Trinitron® Tube 20-inch picture measured diagonally KV-20VS40: Trinitron® Tube 20-inch picture measured diagonally
Screen size	KV-13VM40/41: 13-inch picture measured diagonally KV-20VM40/KV-20VS40: 20-inch picture measured diagonally
Antenna	75-ohm external antenna terminal for VHF/UHF

## Video Section

Format	VHS NTSC standard
VCR system	KV-13VM40/KV-13VM41/KV- 20VM40: Rotary 4-head helical scanning monaural system KV-20VS40: Rotary 4-head helical scanning Hi-Fi stereo system
Audio recording system	KV-13VM40/KV-13VM41/ KV-20VM40: Monaural KV-20VS40: HiFi Stereo
Video signal	NTSC color, EIA standards
Tape speed	SP: 33.35 mm/s (1 3/8 inches/s) EP: 11.11 mm/s (7/16 inches/s) LP: 16.67 mm/s (1 1/16 inches/s), playback only
Maximum recording time	8 hours in EP mode (with T-160 tape)
Inputs	KV-13VM40/KV-13VM41/KV- 20VM40 VIDEO IN: phono jack (2) Input level: 1 Vp-p, 75 ohms, unbalanced, sync negative KV-20VS40 VIDEO IN: phono jack (2) Input level: 1 Vp-p, 75 ohms, unbalanced, sync negative

KV-13VM40/KV-13VM41/  
KV-20VM40

AUDIO IN: phono jack (2)  
Input level: 500 mVrms  
Input impedance: 47 kilohms  
KV-20VS40

AUDIO IN: phono jack (4)  
Input level: 500 mVrms  
Input impedance: 47 kilohms

Headphones jack KV-20VS40: Stereo minijack  
KV-13VM40/KV-13VM41/  
KV-20VM40: Mono minijack

## General

Clock	Quartz locked
Clock back up	Approx. 30 minutes min.
Power requirements	120 V AC, 60 Hz
Power consumption	TV power ON KV-13VM40/KV-13VM41: 69 W KV-20VM40: 88 W KV-20VS40: 89 W Standby KV-13VM40/KV-13VM41/KV- 20VM40/KV-20VS40: 2.9 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Dimensions	KV-13VM40/KV-13VM41: Approx. 375 × 399 × 408 mm (w/h/d) (14 3/4 × 15 3/4 × 16 1/5 inches) KV-20VM40/KV-20VS40: Approx. 506 × 514 × 476 mm (w/h/d) (19 9/10 × 20 1/4 × 18 3/4 inches)
Mass	KV-13VM40/KV-13VM41: Approx. 14.5 kg (31 lbs. 16 oz) KV-20VM40/KV-20VS40: Approx. 26 kg (57 lbs. 5 oz)

## Accessories supplied

Remote control (1)  
R6 (size AA) batteries (2)

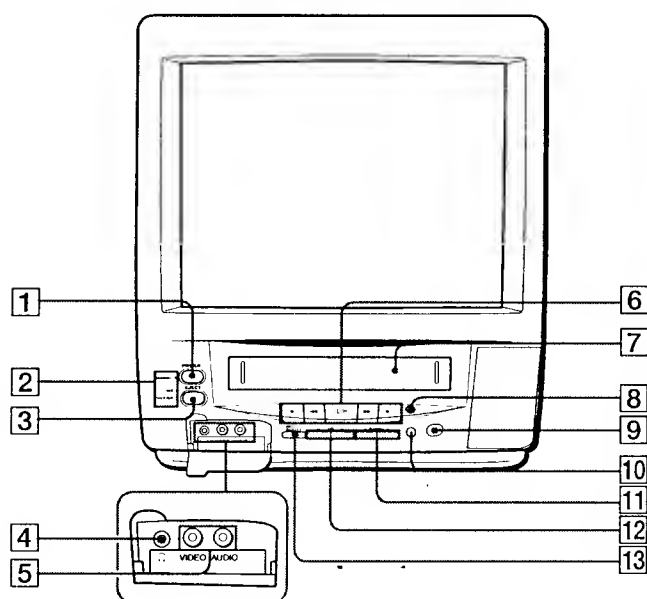
Design and specifications are subject to change  
without notice.

# Index to Parts and Controls

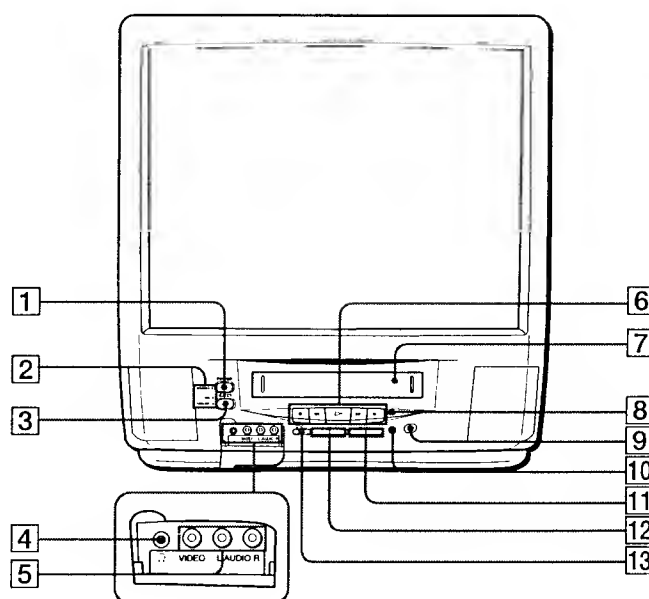
## Video/TV set—front

This section briefly describes the buttons and controls on the Video/TV set and on the remote control. For more information, refer to the pages next to each description.

**KV-13VM40, KV-13VM41**



**KV-20VM40, KV-20VS40**



**1** POWER button (pages 6, 12, 18)

**2** Lamps

⏻/STANDBY (page 18)

REC (recording) (page 29)

TIMER REC (recording) (pages 32, 35)

**3** EJECT ▲ button (page 25)

**4** ⏻ (headphones) jack (page 24)

**5** VIDEO/AUDIO L(MONO)/R jacks (KV-20VS40 only) (page 47)

VIDEO/AUDIO jacks (KV-13VM40, KV-13VM41, and KV-20VM40 only) (page 47)

**6** Tape transport buttons (page 26)

**7** Cassette compartment (page 25)

**8** REC (recording) ● button (page 29)

**9** Remote sensor

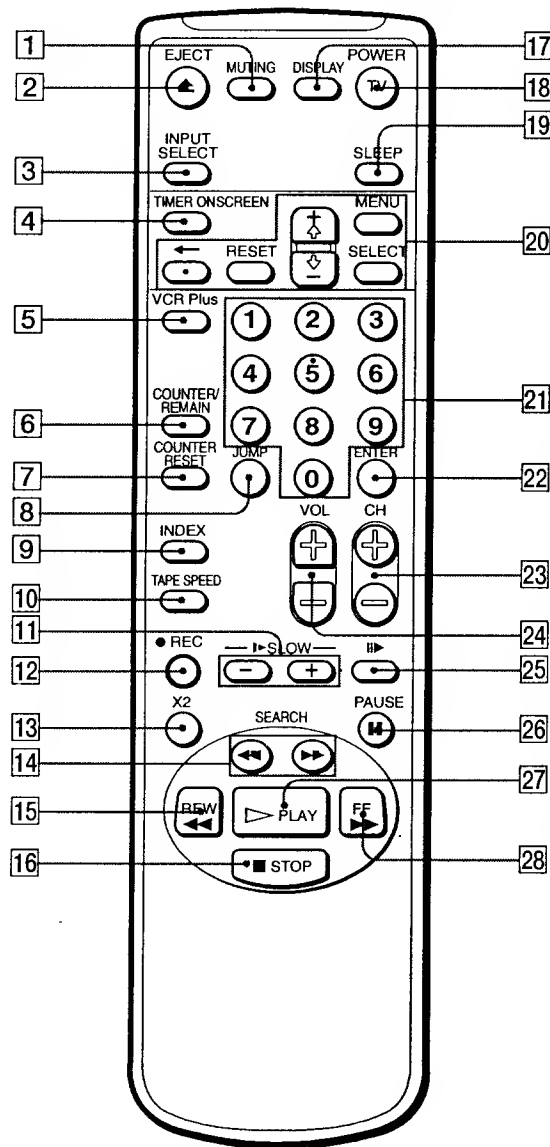
**10** QUICK TIMER REC button (page 34)

**11** CHANNEL +/- buttons (pages 18, 29)

**12** VOL (volume) +/- buttons (page 18)

**13** INPUT SELECT button (pages 24, 29, 47)

# Remote control



- 1 MUTING (muting) button (page 18)
- 2 EJECT button (page 25)
- 3 INPUT SELECT button (pages 24, 29, 47)
- 4 TIMER ON SCREEN (pages 30, 32, 33)
- 5 VCR Plus button (page 35)
- 6 COUNTER/REMAIN button (page 28)
- 7 COUNTER RESET button (pages 25, 28)
- 8 JUMP button (page 18)
- 9 INDEX button (page 44)
- 10 TAPE SPEED button (pages 29, 35)
- 11 SLOW +/- buttons (page 26)
- 12 REC (recording) button (page 29)
- 13 X2 button (page 26)
- 14 SEARCH button (page 26)
- 15 REW (rewind) button (pages 26, 44)
- 16 STOP button (page 26)
- 17 DISPLAY button (pages 24, 28)
- 18 POWER button (pages 6, 12, 18)
- 19 SLEEP button (page 37)
- 20 Menu operation buttons (pages 7, 19, 36)
  - MENU
  - SELECT
  - + / -
  - RESET button
  - (back space button)
- 21 0-9 buttons (pages 18, 29, 35)
- 22 ENTER button (page 17)
- 23 CH (channel) +/- buttons (pages 18, 29)
- 24 VOL (volume) +/- buttons (page 18)
- 25 (frame) button (page 26)
- 26 PAUSE button (pages 26, 29)
- 27 PLAY button (page 26)
- 28 FF (fast forward) button (pages 26, 44)